

Lista de secuencias

|          |                                                            |                                                                        |
|----------|------------------------------------------------------------|------------------------------------------------------------------------|
| <b>1</b> | <b>Información sobre la lista de secuencias</b>            |                                                                        |
| 1-1      | Nombre del fichero                                         | 一种含核酸构建体的药物组合物及其医药用途.xml                                               |
| 1-2      | Versión de la DTD                                          | V1_3                                                                   |
| 1-3      | Nombre del software                                        | WIPO Sequence                                                          |
| 1-4      | Versión del software                                       | 2.3.0                                                                  |
| 1-5      | Fecha de producción                                        | 2024-11-13                                                             |
| 1-7      | Código de idioma de texto libre diferente del inglés       | en                                                                     |
| <b>2</b> | <b>Información general</b>                                 |                                                                        |
| 2-1      | Solicitud actual: Oficina de PI                            | CN                                                                     |
| 2-2      | Solicitud actual: Número de solicitud                      |                                                                        |
| 2-3      | Solicitud actual: Fecha de presentación                    |                                                                        |
| 2-4      | Solicitud actual: Referencia al expediente del solicitante | 一种含核酸构建体的药物组合物及其医药用途                                                   |
| 2-5      | Solicitud de prioridad más antigua: Oficina de PI          | CN                                                                     |
| 2-6      | Solicitud de prioridad más antigua: Número de solicitud    | 202311517076.7                                                         |
| 2-7      | Solicitud de prioridad más antigua: Fecha de presentación  | 2023-11-14                                                             |
| 2-8      | Nombre del solicitante: Nombre en caracteres latinos       | SHANGHAI REGENELEAD THERAPIES CO., LTD                                 |
| 2-8zh    | Nombre del solicitante                                     | 上海瑞宏迪医药有限公司                                                            |
| 2-10zh   | Título de la invención                                     | COMPOSICIÓN FARMACÉUTICA QUE COMPRENDE UN CONSTRUCTO DE ÁCIDO NUCLEICO |

Y SU USO MÉDICO

|         |                                                                      |                                                                                                                |
|---------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| 2-11    | Número total de secuencias                                           | 132                                                                                                            |
| <hr/>   |                                                                      |                                                                                                                |
| 3-1     | Secuencias                                                           |                                                                                                                |
| 3-1-1   | Identificador de la secuencia                                        | 1                                                                                                              |
| 3-1-2   | Tipo de molécula                                                     | DNA                                                                                                            |
| 3-1-3   | Extensión                                                            | 517                                                                                                            |
| 3-1-4-1 | Características Localización/Calificadores                           | source 1..517<br><br>mol_type = other DNA<br><br>note = B1 (ACTG1 3'UTR)<br><br>organism = synthetic construct |
| 3-1-5   | Residuos                                                             |                                                                                                                |
|         | ccgactacct catgaagatc ctcactgagc gaggctacag cttcaccacc acggccgagc60  |                                                                                                                |
|         | gggaaatcgt gcgcgacatc aaggagaagc tgtgctacgt cgccctggac ttcgagcagg120 |                                                                                                                |
|         | agatggccac cgccgcatcc tcctttctc tggagaagag ctacgagctg cccgatggcc180  |                                                                                                                |
|         | aggtcatcac cattggcaat gagcgggtcc ggtgtccgga ggcgctgttc cagccttct240  |                                                                                                                |
|         | tcctgggtat ggaatcttgc ggcatccacg agaccacctt caactccatc atgaagtgtg300 |                                                                                                                |
|         | acgtggacat ccgcaaagac ctgtacgcca acacggtgct gtcgggcggc accaccatgt360 |                                                                                                                |
|         | acccgggcat tgccgacagg atgcagaagg agatcacgcg cctggcgccc agcaccatga420 |                                                                                                                |
|         | agatcaagat catcgacccc ccagagcgca agtactcggg gtggatcggg ggctccatcc480 |                                                                                                                |
|         | tggcctcact gtccaccttc cagcagatgt ggattag517                          |                                                                                                                |
| <hr/>   |                                                                      |                                                                                                                |

### 3-2 Secuencias

|         |                                                                      |                                                                                                |
|---------|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| 3-2-1   | Identificador de la secuencia                                        | 2                                                                                              |
| 3-2-2   | Tipo de molécula                                                     | DNA                                                                                            |
| 3-2-3   | Extensión                                                            | 282                                                                                            |
| 3-2-4-1 | Características Localización/Calificadores                           | source 1..282<br>mol_type = other DNA<br>note = B2 (ATP6V0B)<br>organism = synthetic construct |
| 3-2-5   | Residuos                                                             |                                                                                                |
|         | atgatatgtg tgggtggggc cgtgcctcac tttatttat tgctggttt cctgggacag60    |                                                                                                |
|         | ctggagctgt gtccttagc cttcagagg ctggtgttc agggccctcc ctgcactccc120    |                                                                                                |
|         | ctcttgctgc gtgttgattt ggaggcactg cagtccaggc cgagtcctca gtgcggggag180 |                                                                                                |
|         | caggctgctg ctgctgactc tgtgcagctg cgcacctgtg tccccacct ccaccctcaa240  |                                                                                                |
|         | cccatcttc tagtgtttgt gaaataaact tggattttgt ct282                     |                                                                                                |

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### 3-3 Secuencias

|         |                                            |                                                              |
|---------|--------------------------------------------|--------------------------------------------------------------|
| 3-3-1   | Identificador de la secuencia              | 3                                                            |
| 3-3-2   | Tipo de molécula                           | DNA                                                          |
| 3-3-3   | Extensión                                  | 308                                                          |
| 3-3-4-1 | Características Localización/Calificadores | source 1..308<br>mol_type = other DNA<br>note = B3 (ATP6V0B) |

organism = synthetic construct

3-3-5      Residuos

gttgaagaac ttctcttac cgagcagccc gtaacccct tttctccct cactgctgca60

ggagtctgct acaccatttt tgatttgggc ttccgctttg atgtggcatg gttctgacg120

gagacttcgc ccttcatttg gtccaacctg ggcattggcc tagctatctc cctgtctgtg180

gttggggcag cctggggcat ctatattacc ggctcctcca tcattggtgg aggagtgaag240

gccccagga tcaagaccaa gaacctggc agcatcatct tctgtgaggc tgtggccatc300

tacggcat308

3-4      Secuencias

3-4-1      Identificador de la secuencia      4

3-4-2      Tipo de molécula      DNA

3-4-3      Extensión      226

3-4-4-1      Características Localización/Calificadores      source 1..226

mol\_type = other DNA

note = B4 (ATP6V0E1 3'UTR)

organism = synthetic construct

3-4-5      Residuos

ggaagaagac atgctctaca gtgctcagtc ttgagggtga ctatgcttgt gacctttctt60

atcagtatgg tcaggcagtc agagtttgcc ttgactttt ctacatttt atggccattt120

taacacgtgg caagggaag ctgctgaatg caaacacgat ctgaagagca gaaataaaat180

tggaacttaa gccttagctt acctaaatct cattaagatt cttttt226

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### 3-5      **Secuencias**

|         |                                            |                                                                                                                                   |
|---------|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 3-5-1   | Identificador de la secuencia              | <b>5</b>                                                                                                                          |
| 3-5-2   | Tipo de molécula                           | <b>DNA</b>                                                                                                                        |
| 3-5-3   | Extensión                                  | <b>461</b>                                                                                                                        |
| 3-5-4-1 | Características Localización/Calificadores | <b>source 1..461</b><br><b>mol_type = other DNA</b><br><b>note = B5 (ATP6V0E1 3'UTR)</b><br><b>organism = synthetic construct</b> |

#### 3-5-5      Residuos

atgcaaaatc acctccaaac cagaccactt ttctgactt gcctgttttg gccattagct60  
gccttaaacg ttaacagcac atttgaatgc cttattctac aatgcagcgt gtttccttt120  
gccttttttg cactttggtg aattacgtgc ctccataacc tgaactgtgc cgactccaca180  
aaacgattat gtactcttct gagatagaag atgctgttct tctgagagat acgttactct240  
ctccttgga tctgtggatt tgaagatggc tctgccttc tcacgtggga atcagtgaag300  
tgtttagaaa ctgctgcaag acaacaaga ctccagtggg gtggtcagta ggagagcacg360  
ttcagaggga agagccatct caacagaatc gcaccaaact atacttcag gatgaatttc420  
ttcttctgc catcttttgg aataaatatt ttctccttt c461

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### 3-6      **Secuencias**

|       |                               |            |
|-------|-------------------------------|------------|
| 3-6-1 | Identificador de la secuencia | <b>6</b>   |
| 3-6-2 | Tipo de molécula              | <b>DNA</b> |

|         |                                            |                                                                                                                               |
|---------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 3-6-3   | Extensión                                  | 499                                                                                                                           |
| 3-6-4-1 | Características Localización/Calificadores | <b>source 1..499</b><br><b>mol_type = other DNA</b><br><b>note = B6 (CFL1 3'UTR)</b><br><b>organism = synthetic construct</b> |

3-6-5 Residuos

gcccctctg gccccctgcc tggagcatct ggcagcccca cacctgcctt tgggggtgac60

aggctgcccc ctctctgcca gaccggaggg gctgggggga tcccagcagg gggagggcaa120

tccctcacc ccagttgcca aacagacccc ccacccctg gatttcctt ctccctccat180

cccttgacgg ttctggcctt cccaaactgc tttgatctt ttgattcctc ttgggctgaa240

gcagaccaag tccccccag gcacccagc tgggggggag cctgtatatt tttaacaac300

atccccattc cccacctggt cctccccctt cccatgctgc caacttctaa ccgcaatagt360

gactctgtgc ttgtctgtt agttctgtgt ataatggaa tgtgtggag atgaccctc420

cctgtgccgg ctggttcctc tccctttcc cctggtcacg gctactcatg gaagcaggac480

cagtaaggga ccttcgatt499

### 3-7 Secuencias

|         |                                            |                                                     |
|---------|--------------------------------------------|-----------------------------------------------------|
| 3-7-1   | Identificador de la secuencia              | 7                                                   |
| 3-7-2   | Tipo de molécula                           | DNA                                                 |
| 3-7-3   | Extensión                                  | 282                                                 |
| 3-7-4-1 | Características Localización/Calificadores | <b>source 1..282</b><br><b>mol_type = other DNA</b> |

note = B7 (CFL1 3'UTR)  
organism = synthetic construct

3-7-5      Residuos

gcccctctg gccccctgcc tggagcatct ggcagcccca cacctgcctt tgggggttgc60

aggctgcccc ctctctgcc gaccggaggg gctgggggga tcccagcagg gggagggcaa120

tccctcacc ccagttgcc aacagacccc ccacccctg gatttcctt ctccctccat180

cccttgacgg ttctggcctt cccaaactgc tttgatctt ttgattcctc ttgggctgaa240

gcagaccaag ttccccccag gcacccagc tgggggggag cc282

3-8      Secuencias

3-8-1      Identificador de la secuencia      8

3-8-2      Tipo de molécula      DNA

3-8-3      Extensión      361

3-8-4-1    Características Localización/Calificadores      source 1..361

mol\_type = other DNA

note = B8 (CFL1 3'UTR)

organism = synthetic construct

3-8-5      Residuos

gcccctctg gccccctgcc tggagcatct ggcagcccca cacctgcctt tgggggttgc60

aggctgcccc ctctctgcc gaccggaggg gctgggggga tcccagcagg gggagggcaa120

tccctcacc ccagttgcc aacagacccc ccacccctg gatttcctt ctccctccat180

cccttgacgg ttctggcctt cccaaactgc tttgatctt ttgattcctc ttgggctgaa240

gcagaccaag ttccccag gcacccagc tgtgggggag cctgtat ttttaacaac300  
atccccattc cccacctggc cctccccctt cccatgctgc caacttctaa ccgcaatagt360  
g361

**3-9      Secuencias**

|         |                                                                     |                                                                                                                                 |
|---------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| 3-9-1   | Identificador de la secuencia                                       | <b>9</b>                                                                                                                        |
| 3-9-2   | Tipo de molécula                                                    | <b>DNA</b>                                                                                                                      |
| 3-9-3   | Extensión                                                           | <b>128</b>                                                                                                                      |
| 3-9-4-1 | Características Localización/Calificadores                          | <b>source 1..128</b><br><b>mol_type = other DNA</b><br><b>note = B9 (COX4I1 3'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-9-5   | Residuos                                                            |                                                                                                                                 |
|         | gagatgctgg cctgcgctg cacctgcgcc tggctctgtc accgcatgc aactccatgc60   |                                                                                                                                 |
|         | ctatttactg gaaacctgtt atgcaaaca gttgtaccac tgctaataaa tgaccagttt120 |                                                                                                                                 |
|         | acctgaaa128                                                         |                                                                                                                                 |

**3-10      Secuencias**

|          |                                            |                      |
|----------|--------------------------------------------|----------------------|
| 3-10-1   | Identificador de la secuencia              | <b>10</b>            |
| 3-10-2   | Tipo de molécula                           | <b>DNA</b>           |
| 3-10-3   | Extensión                                  | <b>319</b>           |
| 3-10-4-1 | Características Localización/Calificadores | <b>source 1..319</b> |

**organism = synthetic construct**

agggacccac aggcgcgccc agcagctctc ggaagcgttg tatcgatta agttcaagga60  
gagctttgct gagatgaaca ggggctcgaa cgagtggaaag acggttgtag gcggtgccat120  
gtttctcatt ggtttaccg cgctcgatat catgtggcag aagcactatg ggcttagcct180  
ccaagtggga ctacgaaaag aacgagtgga agaagtgaga gatgctggcc tgcgcctgca240  
cctgcgcctg gctctgtcac cgccatgcaa ctccatgcct attactgga aacctgttat300  
gccaaacagt tgtaccact319

**organism = synthetic construct**

agaggacctt ctgcttttag cttattttgt tgctaacttt ttacaaacaa agggctaatt60  
ttaaatagtc agtgtgtgca gtggcgacaa accgtgtgtt tgagcgggtg ttgagtggca120

ggtggctctg ctgacctggt ggctggtgtg tcgggaggat ttaacctgtg tgagggattg180  
gcctagaaac aacctgttga gatagtcttg ccccataacc tgtctcacac cgtagtgtac240  
ggccccctcc cgcaaagctt tgacaaagag tgggtggcca agcagaccaa gaggatgctg300  
gac303

**3-12      Secuencias**

|          |                                                                     |                                                                                                                                |
|----------|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| 3-12-1   | Identificador de la secuencia                                       | <b>12</b>                                                                                                                      |
| 3-12-2   | Tipo de molécula                                                    | <b>DNA</b>                                                                                                                     |
| 3-12-3   | Extensión                                                           | <b>232</b>                                                                                                                     |
| 3-12-4-1 | Características Localización/Calificadores                          | <b>source 1..232</b><br><b>mol_type = other DNA</b><br><b>note = B12 (CTSB 3'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-12-5   | Residuos                                                            |                                                                                                                                |
|          | tctgccgtgg gcctgtcgtg ccagtcctgg gggcgagatc gggagaatca cgtcctggaa60 |                                                                                                                                |
|          | ctgcatgttc ttgcgactct tgggacttca tcttaacttc tcgtgcccc agccatgttt120 |                                                                                                                                |
|          | tcaacctatgg catccctccc ccaattagt ccctgtcatc ctgtcaacc ttctctgtaa180 |                                                                                                                                |
|          | gtgcctggta agcttgcctt tgcttaagaa ctcaaaacat agctgtgctc ta232        |                                                                                                                                |

**3-13      Secuencias**

|        |                               |            |
|--------|-------------------------------|------------|
| 3-13-1 | Identificador de la secuencia | <b>13</b>  |
| 3-13-2 | Tipo de molécula              | <b>DNA</b> |

|          |                                                                   |                                                                                                                                   |
|----------|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 3-13-3   | Extensión                                                         | <b>115</b>                                                                                                                        |
| 3-13-4-1 | Características Localización/Calificadores                        | <b>source 1..115</b><br><b>mol_type = other DNA</b><br><b>note = B13 (FAM166A 3'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-13-5   | Residuos                                                          |                                                                                                                                   |
|          | aaatgctta atggtggtgt ctgtacagca tggatgtgga cagggaaaac agcaagtga60 |                                                                                                                                   |
|          | cacagtggga caggccacag gacaggctgg gagtgaataa agagtcaca ctgct115    |                                                                                                                                   |

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### 3-14      Secuencias

|          |                                                                     |                                                                                                                                  |
|----------|---------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| 3-14-1   | Identificador de la secuencia                                       | <b>14</b>                                                                                                                        |
| 3-14-2   | Tipo de molécula                                                    | <b>DNA</b>                                                                                                                       |
| 3-14-3   | Extensión                                                           | <b>196</b>                                                                                                                       |
| 3-14-4-1 | Características Localización/Calificadores                          | <b>source 1..196</b><br><b>mol_type = other DNA</b><br><b>note = B14 (NDUFB9 3'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-14-5   | Residuos                                                            |                                                                                                                                  |
|          | tatctaagtg tatcaattta acatttataa tcaccttaca agtaagttaa agtgcattcc60 |                                                                                                                                  |
|          | ctggtcgttt tggctttgtc ttgattttg cttcagatct cttctcttt agtcctttgt120  |                                                                                                                                  |
|          | ctgacttttt tgccttcttg ctatacttc cctcaacctg cctctccact attttcttag180 |                                                                                                                                  |
|          | gcatttttca gtcattg196                                               |                                                                                                                                  |

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**3-15      Secuencias**

|          |                                                           |                                                                                                                               |
|----------|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 3-15-1   | Identificador de la secuencia                             | <b>15</b>                                                                                                                     |
| 3-15-2   | Tipo de molécula                                          | <b>DNA</b>                                                                                                                    |
| 3-15-3   | Extensión                                                 | <b>54</b>                                                                                                                     |
| 3-15-4-1 | Características Localización/Calificadores                | <b>source 1..54</b><br><b>mol_type = other DNA</b><br><b>note = A1 (ACTG1 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-15-5   | Residuos                                                  |                                                                                                                               |
|          | ctctcgact ctgttcttc gccgctccgc cgtcgcggtt ctctgccggt cgca | <b>54</b>                                                                                                                     |

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**3-16      Secuencias**

|          |                                                                  |                                                                                                                                  |
|----------|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| 3-16-1   | Identificador de la secuencia                                    | <b>16</b>                                                                                                                        |
| 3-16-2   | Tipo de molécula                                                 | <b>DNA</b>                                                                                                                       |
| 3-16-3   | Extensión                                                        | <b>185</b>                                                                                                                       |
| 3-16-4-1 | Características Localización/Calificadores                       | <b>source 1..185</b><br><b>mol_type = other DNA</b><br><b>note = A2 (ATP6V0B 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-16-5   | Residuos                                                         |                                                                                                                                  |
|          | ggggggggcg acagactgcg ggacggacgg tggacgctgg gacgcgttg tagctccggc | <b>60</b>                                                                                                                        |

cccgccgttc cgacccccgc cgccgtcgcc gccatgacgg ggctagcact gctctactcc120  
gggggtcttcg tggccttctg ggcctgcgcg ctggccgtgg gttcctgacg gagacttcgc180  
ccttc185

**3-17      Secuencias**

|          |                                                                                                 |                                                                                                     |
|----------|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| 3-17-1   | Identificador de la secuencia                                                                   | 17                                                                                                  |
| 3-17-2   | Tipo de molécula                                                                                | DNA                                                                                                 |
| 3-17-3   | Extensión                                                                                       | 81                                                                                                  |
| 3-17-4-1 | Características Localización/Calificadores                                                      | source 1..81<br>mol_type = other DNA<br>note = A3 (ATP6V0B 5'UTR)<br>organism = synthetic construct |
| 3-17-5   | Residuos                                                                                        |                                                                                                     |
|          | agactgcggg acggacggtg gacgctggga cgcgtttgta gctccggccc cgccgttcg60<br>acccccgccg ccgtcgccgc c81 |                                                                                                     |

**3-18      Secuencias**

|          |                                            |                                      |
|----------|--------------------------------------------|--------------------------------------|
| 3-18-1   | Identificador de la secuencia              | 18                                   |
| 3-18-2   | Tipo de molécula                           | DNA                                  |
| 3-18-3   | Extensión                                  | 30                                   |
| 3-18-4-1 | Características Localización/Calificadores | source 1..30<br>mol_type = other DNA |

note = A4 (ATP6V0E1 5'UTR)  
organism = synthetic construct

3-18-5    Residuos  
  
            ggggtagggg ttggcgctca ggcggcgacc30

**3-19      Secuencias**

|          |                                            |                                                                                                                  |
|----------|--------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| 3-19-1   | Identificador de la secuencia              | 19                                                                                                               |
| 3-19-2   | Tipo de molécula                           | DNA                                                                                                              |
| 3-19-3   | Extensión                                  | 80                                                                                                               |
| 3-19-4-1 | Características Localización/Calificadores | source 1..80<br><br>mol_type = other DNA<br><br>note = A5 (ATP6V0E1 5'UTR)<br><br>organism = synthetic construct |

3-19-5    Residuos  
  
            gtcacgcggt cagctattga cacttcctgg tgggatccga gtgaggcgac ggggtagggg60  
  
            ttggcgctca ggcggcgacc80

**3-20      Secuencias**

|          |                                            |               |
|----------|--------------------------------------------|---------------|
| 3-20-1   | Identificador de la secuencia              | 20            |
| 3-20-2   | Tipo de molécula                           | DNA           |
| 3-20-3   | Extensión                                  | 234           |
| 3-20-4-1 | Características Localización/Calificadores | source 1..234 |

**organism = synthetic construct**

ggccggcggg aagactccgt tacccagcga gcgaggcggc ggcgaggggc cagcggactc60  
catttccgtt cggctcgcgg tgggagcgcc ggaagcccg cccacccctc attgtgcggc120  
tcctactaaa cggaaggggc cgggagaggc cgcgttcagt cgggtcccgg cagcggctgc180  
agcgcctcgc tctctgcgg ctctcggcgc cctctcctt tcgtttccgg aaac234

ctctctggctc gggcaccocg aagcacgacg cagagtagga agagtttaaa gacctcgagg60  
cctctgggca cttgagtttg gcctccggtg tggctgtctc tgatggtgtc atcaagggt120  
tcaacgac128

### 3-22      Secuencias

|          |                                                                 |                                                                                                                               |
|----------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 3-22-1   | Identificador de la secuencia                                   | <b>22</b>                                                                                                                     |
| 3-22-2   | Tipo de molécula                                                | <b>DNA</b>                                                                                                                    |
| 3-22-3   | Extensión                                                       | <b>151</b>                                                                                                                    |
| 3-22-4-1 | Características Localización/Calificadores                      | <b>source 1..151</b><br><b>mol_type = other DNA</b><br><b>note = A8 (CFL1 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-22-5   | Residuos                                                        |                                                                                                                               |
|          | acgtggccgg cttctctgc agtccgggg agttggggg accagatta cctggattg60  |                                                                                                                               |
|          | ccccccctc tctggctcg ggcaccccg agcacgacg agagcctcg gtgtggctgt120 |                                                                                                                               |
|          | ctctgatggt gtcacaaagg tgtcaacga c151                            |                                                                                                                               |

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### 3-23      Secuencias

|          |                                            |                                                                                                                                |
|----------|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| 3-23-1   | Identificador de la secuencia              | <b>23</b>                                                                                                                      |
| 3-23-2   | Tipo de molécula                           | <b>DNA</b>                                                                                                                     |
| 3-23-3   | Extensión                                  | <b>70</b>                                                                                                                      |
| 3-23-4-1 | Características Localización/Calificadores | <b>source 1..70</b><br><b>mol_type = other DNA</b><br><b>note = A9 (COX4I1 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-23-5   | Residuos                                   |                                                                                                                                |

gcggccttgc tctctccgg tcgcgggaca ccgggtgtag agggcggtcg cggcgggcag60  
tggcggcaga70

**3-24      Secuencias**

|          |                                                      |                                                                                                                                 |
|----------|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| 3-24-1   | Identificador de la secuencia                        | <b>24</b>                                                                                                                       |
| 3-24-2   | Tipo de molécula                                     | <b>DNA</b>                                                                                                                      |
| 3-24-3   | Extensión                                            | <b>46</b>                                                                                                                       |
| 3-24-4-1 | Características Localización/Calificadores           | <b>source 1..46</b><br><b>mol_type = other DNA</b><br><b>note = A10 (COX4I1 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-24-5   | Residuos                                             |                                                                                                                                 |
|          | gggacaccgg gtgtagaggg cggtcgcggc gggcagtggc ggcaga46 |                                                                                                                                 |

**3-25      Secuencias**

|          |                                            |                                                                                                                                 |
|----------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| 3-25-1   | Identificador de la secuencia              | <b>25</b>                                                                                                                       |
| 3-25-2   | Tipo de molécula                           | <b>DNA</b>                                                                                                                      |
| 3-25-3   | Extensión                                  | <b>71</b>                                                                                                                       |
| 3-25-4-1 | Características Localización/Calificadores | <b>source 1..71</b><br><b>mol_type = other DNA</b><br><b>note = A11 (COX4I1 5'UTR)</b><br><b>organism = synthetic construct</b> |

3-25-5    Residuos

cgcggccttg ctctcttcg gtcgcgggac accgggtgta gagggcggtc gcggcgggca60

gtggcggcag a71

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**3-26      Secuencias**

|          |                                            |                                                                                                                                |
|----------|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| 3-26-1   | Identificador de la secuencia              | <b>26</b>                                                                                                                      |
| 3-26-2   | Tipo de molécula                           | <b>DNA</b>                                                                                                                     |
| 3-26-3   | Extensión                                  | <b>137</b>                                                                                                                     |
| 3-26-4-1 | Características Localización/Calificadores | <b>source 1..137</b><br><b>mol_type = other DNA</b><br><b>note = A12 (CTSB 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-26-5   | Residuos                                   |                                                                                                                                |

ggccggggct ggcccaggct acggcggtg cagggtccg gcaaccgctc cggaacgcc60

aaccgctccg ctgcgcgag gctgggctgc aggctctcg ctgcagcgct gggtgatct120

aggatccggc ttccaac137

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**3-27      Secuencias**

|          |                                            |                     |
|----------|--------------------------------------------|---------------------|
| 3-27-1   | Identificador de la secuencia              | <b>27</b>           |
| 3-27-2   | Tipo de molécula                           | <b>DNA</b>          |
| 3-27-3   | Extensión                                  | <b>55</b>           |
| 3-27-4-1 | Características Localización/Calificadores | <b>source 1..55</b> |

**mol\_type = other DNA**  
**note = A13 (FAM166A 5'UTR)**  
**organism = synthetic construct**

3-27-5    Residuos  
  
aagggagctg gatgccggga gggactggag ccagcaaggc cagagtgaaa gcaaa55

**3-28      Secuencias**

|          |                                            |                                                                                                                                     |
|----------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| 3-28-1   | Identificador de la secuencia              | <b>28</b>                                                                                                                           |
| 3-28-2   | Tipo de molécula                           | <b>DNA</b>                                                                                                                          |
| 3-28-3   | Extensión                                  | <b>56</b>                                                                                                                           |
| 3-28-4-1 | Características Localización/Calificadores | <b>source 1..56</b><br><br><b>mol_type = other DNA</b><br><b>note = A14 (NDUFB9 5'UTR)</b><br><b>organism = synthetic construct</b> |

3-28-5    Residuos  
  
gcagcaggcg tgcagtttc cggtctccg cgcggccggg gaaggtcagc gccgta56

**3-29      Secuencias**

|          |                                            |                     |
|----------|--------------------------------------------|---------------------|
| 3-29-1   | Identificador de la secuencia              | <b>29</b>           |
| 3-29-2   | Tipo de molécula                           | <b>DNA</b>          |
| 3-29-3   | Extensión                                  | <b>68</b>           |
| 3-29-4-1 | Características Localización/Calificadores | <b>source 1..68</b> |

**organism = synthetic construct**

ggcattgtc cccgcgacag caccgctgcc gccgtctcta aggtcgcccg ggtcccaccg60  
ccgccacc68

ccgctgccgc cgtcttaag gtcgccggg tcccaccgcc gccacc46

41

|          |                                            |                                                                                                                                  |
|----------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| 3-31-4-1 | Características Localización/Calificadores | <b>source 1..41</b><br><b>mol_type = other DNA</b><br><b>note = A17 (SLC38A2 5'UTR)</b><br><b>organism = synthetic construct</b> |
|----------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|

|                                              |          |
|----------------------------------------------|----------|
| 3-31-5                                       | Residuos |
| atgtctttt tgtgtgttg tttcatggt attcctatga a41 |          |

---

|             |                   |
|-------------|-------------------|
| <b>3-32</b> | <b>Secuencias</b> |
|-------------|-------------------|

|          |                                            |                                                                                                                                  |
|----------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| 3-32-1   | Identificador de la secuencia              | <b>32</b>                                                                                                                        |
| 3-32-2   | Tipo de molécula                           | <b>DNA</b>                                                                                                                       |
| 3-32-3   | Extensión                                  | <b>48</b>                                                                                                                        |
| 3-32-4-1 | Características Localización/Calificadores | <b>source 1..48</b><br><b>mol_type = other DNA</b><br><b>note = A18 (NDUFA11 5'UTR)</b><br><b>organism = synthetic construct</b> |

|                                                       |          |
|-------------------------------------------------------|----------|
| 3-32-5                                                | Residuos |
| gcttcccag ctggcggggt ccgtggtgcg ggatcgagat tgcgggct48 |          |

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|             |                   |
|-------------|-------------------|
| <b>3-33</b> | <b>Secuencias</b> |
|-------------|-------------------|

|        |                               |            |
|--------|-------------------------------|------------|
| 3-33-1 | Identificador de la secuencia | <b>33</b>  |
| 3-33-2 | Tipo de molécula              | <b>DNA</b> |
| 3-33-3 | Extensión                     | <b>69</b>  |

3-33-4-1 Características Localización/Calificadores **source 1..69**  
**mol\_type = other DNA**  
**note = A19 (NDUFV3 5'UTR)**  
**organism = synthetic construct**

3-33-5 Residuos  
ggcggctgtt caggcgcggg tgcgcgcgca gctgctgtgg ccctgcttgg tgcgcccgt60  
gtcaccgcc69

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**3-34 Secuencias**

3-34-1 Identificador de la secuencia **34**  
3-34-2 Tipo de molécula **DNA**  
3-34-3 Extensión **128**  
3-34-4-1 Características Localización/Calificadores **source 1..128**  
**mol\_type = other DNA**  
**note = A20 (PRDX5 5'UTR)**  
**organism = synthetic construct**

3-34-5 Residuos  
cgcgctgcg cagtggaggc ggcccaggcc cgcctccgc aggggtgctgc cgctgtgccg60  
ctagcgggtgc ccgcctgct gcggtggcac cagccaggag gcggagtgga agtggccgtg120  
gggcgggt128

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**3-35 Secuencias**

|          |                                                                   |                                                                                                                               |
|----------|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 3-35-1   | Identificador de la secuencia                                     | <b>35</b>                                                                                                                     |
| 3-35-2   | Tipo de molécula                                                  | <b>DNA</b>                                                                                                                    |
| 3-35-3   | Extensión                                                         | <b>59</b>                                                                                                                     |
| 3-35-4-1 | Características Localización/Calificadores                        | <b>source 1..59</b><br><b>mol_type = other DNA</b><br><b>note = A21 (GUK1 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-35-5   | Residuos                                                          |                                                                                                                               |
|          | cagcagatgg ggactagagg ccgcactgct atccacagcc tctcttctca ccccaggc59 |                                                                                                                               |

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### **3-36      Secuencias**

|          |                                                                     |                                                                                                                               |
|----------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 3-36-1   | Identificador de la secuencia                                       | <b>36</b>                                                                                                                     |
| 3-36-2   | Tipo de molécula                                                    | <b>DNA</b>                                                                                                                    |
| 3-36-3   | Extensión                                                           | <b>68</b>                                                                                                                     |
| 3-36-4-1 | Características Localización/Calificadores                          | <b>source 1..68</b><br><b>mol_type = other DNA</b><br><b>note = A22 (GUK1 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-36-5   | Residuos                                                            |                                                                                                                               |
|          | gctggccggg ctggctgcgg ccgccctggg ccgggcccga ccggacgcct ctcttctcac60 |                                                                                                                               |
|          | ccccaggc68                                                          |                                                                                                                               |

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### **3-37      Secuencias**

|          |                                                                    |                                                                                                                               |
|----------|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 3-37-1   | Identificador de la secuencia                                      | <b>37</b>                                                                                                                     |
| 3-37-2   | Tipo de molécula                                                   | <b>DNA</b>                                                                                                                    |
| 3-37-3   | Extensión                                                          | <b>96</b>                                                                                                                     |
| 3-37-4-1 | Características Localización/Calificadores                         | <b>source 1..96</b><br><b>mol_type = other DNA</b><br><b>note = A23 (GUK1 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-37-5   | Residuos                                                           |                                                                                                                               |
|          | agaggtggcc cccgatgctg cggcgccgc tggccgggct ggctgcggcc gccctgggcc60 |                                                                                                                               |
|          | gggccccacc ggacgcctct ctttcaccc ccaggc96                           |                                                                                                                               |

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### **3-38      Secuencias**

|          |                                            |                                                                                                                               |
|----------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 3-38-1   | Identificador de la secuencia              | <b>38</b>                                                                                                                     |
| 3-38-2   | Tipo de molécula                           | <b>DNA</b>                                                                                                                    |
| 3-38-3   | Extensión                                  | <b>37</b>                                                                                                                     |
| 3-38-4-1 | Características Localización/Calificadores | <b>source 1..37</b><br><b>mol_type = other DNA</b><br><b>note = A24 (IAH1 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-38-5   | Residuos                                   |                                                                                                                               |
|          | tggctggcgg ccccgccccg ccccgcccg ctgctcc37  |                                                                                                                               |

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**3-39      Secuencias**

|          |                                                                    |                                                                                                                                  |
|----------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| 3-39-1   | Identificador de la secuencia                                      | <b>39</b>                                                                                                                        |
| 3-39-2   | Tipo de molécula                                                   | <b>DNA</b>                                                                                                                       |
| 3-39-3   | Extensión                                                          | <b>59</b>                                                                                                                        |
| 3-39-4-1 | Características Localización/Calificadores                         | <b>source 1..59</b><br><b>mol_type = other DNA</b><br><b>note = A25 (ABHD16A 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-39-5   | Residuos                                                           |                                                                                                                                  |
|          | ggagggcggg gccggcaggg ggacctgctg ctggaagagc agcgggccga gccggggcc59 |                                                                                                                                  |

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**3-40      Secuencias**

|          |                                                                     |                                                                                                                                    |
|----------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| 3-40-1   | Identificador de la secuencia                                       | <b>40</b>                                                                                                                          |
| 3-40-2   | Tipo de molécula                                                    | <b>DNA</b>                                                                                                                         |
| 3-40-3   | Extensión                                                           | <b>132</b>                                                                                                                         |
| 3-40-4-1 | Características Localización/Calificadores                          | <b>source 1..132</b><br><b>mol_type = other DNA</b><br><b>note = A26 (SLC25A39 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-40-5   | Residuos                                                            |                                                                                                                                    |
|          | tttcggcgtc ggcctaggtg cgctgcgagc gcgcgcggac cgcgcacagg cggcggagcc60 |                                                                                                                                    |

ggtatgggcc cgcctgaccc tgggcgccgc gccgcacgag caccagccta gagccaggac120  
tgaagcttca ag132

**3-41      Secuencias**

|          |                                                            |                                                                                                                                 |
|----------|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| 3-41-1   | Identificador de la secuencia                              | <b>41</b>                                                                                                                       |
| 3-41-2   | Tipo de molécula                                           | <b>DNA</b>                                                                                                                      |
| 3-41-3   | Extensión                                                  | <b>51</b>                                                                                                                       |
| 3-41-4-1 | Características Localización/Calificadores                 | <b>source 1..51</b><br><b>mol_type = other DNA</b><br><b>note = A27 (ATPIF1 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-41-5   | Residuos                                                   |                                                                                                                                 |
|          | cgagagactg ctgtctgccc cagagacgcc agaggtgcag ctccagcagc a51 |                                                                                                                                 |

**3-42      Secuencias**

|          |                                            |                                                                                                                                  |
|----------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| 3-42-1   | Identificador de la secuencia              | <b>42</b>                                                                                                                        |
| 3-42-2   | Tipo de molécula                           | <b>DNA</b>                                                                                                                       |
| 3-42-3   | Extensión                                  | <b>71</b>                                                                                                                        |
| 3-42-4-1 | Características Localización/Calificadores | <b>source 1..71</b><br><b>mol_type = other DNA</b><br><b>note = A28 (ANAPC11 5'UTR)</b><br><b>organism = synthetic construct</b> |

3-42-5    Residuos

cgagatttcg tcattgtggc caggccatt tgagatctt gaagatatcc tcaacgtgag60

gctctgctgc c71

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**3-43      Secuencias**

|          |                                            |                                                                                                                                  |
|----------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| 3-43-1   | Identificador de la secuencia              | <b>43</b>                                                                                                                        |
| 3-43-2   | Tipo de molécula                           | <b>DNA</b>                                                                                                                       |
| 3-43-3   | Extensión                                  | <b>55</b>                                                                                                                        |
| 3-43-4-1 | Características Localización/Calificadores | <b>source 1..55</b><br><b>mol_type = other DNA</b><br><b>note = A29 (ANAPC11 5'UTR)</b><br><b>organism = synthetic construct</b> |

3-43-5    Residuos

gggcgcggct tcggcgggcg gcagccgctg cagacgagct gcgggctctg ctgcc55

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**3-44      Secuencias**

|          |                                            |                                                                                        |
|----------|--------------------------------------------|----------------------------------------------------------------------------------------|
| 3-44-1   | Identificador de la secuencia              | <b>44</b>                                                                              |
| 3-44-2   | Tipo de molécula                           | <b>DNA</b>                                                                             |
| 3-44-3   | Extensión                                  | <b>48</b>                                                                              |
| 3-44-4-1 | Características Localización/Calificadores | <b>source 1..48</b><br><b>mol_type = other DNA</b><br><b>note = A30 (CCDC12 5'UTR)</b> |

**organism = synthetic construct**

3-44-5 Residuos

gcctgcgcga tgcaagacgg gagaaaagga ggggcgtacg cgggcaag48

### 3-45 Secuencias

3-45-1 Identificador de la secuencia

45

3-45-2 Tipo de molécula

## DNA

3-45-3 Extensión

132

### 3-45-4-1 Características Localización/Calificadores

**source 1..132**

**mol\_type = other DNA**

**note = A31 (MRPL14 5'UTR)**

**organism = synthetic construct**

3-45-5 Residuos

atcgcggtccg ccggggtggg cctggcgcg c aggcgctagg aagaggccgc gtgggggcgaa60

ggcggcgctt ggctggtggg gcccgcggcg ggattttccc gggcggcgag agcggatcta120

tcttgggata cc132

### 3-46 Secuencias

3-46-1 Identificador de la secuencia

46

3-46-2 Tipo de molécula

## DNA

3-46-3 Extensión

27

### 3-46-4-1 Características Localización/Calificadores

source 1..27

**mol\_type = other DNA**  
**note = A32 (APOA1BP 5'UTR)**  
**organism = synthetic construct**

3-46-5    Residuos  
  
            gccgggggcg cgcgctctgc gagctgg27

**3-47      Secuencias**

|          |                                            |                                                                                                                                      |
|----------|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| 3-47-1   | Identificador de la secuencia              | <b>47</b>                                                                                                                            |
| 3-47-2   | Tipo de molécula                           | <b>DNA</b>                                                                                                                           |
| 3-47-3   | Extensión                                  | <b>43</b>                                                                                                                            |
| 3-47-4-1 | Características Localización/Calificadores | <b>source 1..43</b><br><br><b>mol_type = other DNA</b><br><b>note = A33 (APOA1BP 5'UTR)</b><br><b>organism = synthetic construct</b> |

3-47-5    Residuos  
  
            gccggggccg ggccggggccg ggggcgcgcg ctcgcgagc tgg43

**3-48      Secuencias**

|          |                                            |                     |
|----------|--------------------------------------------|---------------------|
| 3-48-1   | Identificador de la secuencia              | <b>48</b>           |
| 3-48-2   | Tipo de molécula                           | <b>DNA</b>          |
| 3-48-3   | Extensión                                  | <b>47</b>           |
| 3-48-4-1 | Características Localización/Calificadores | <b>source 1..47</b> |

**organism = synthetic construct**

gggaaataag agagaaaaga agagtaagaa gaaatataag agccacc47

**organism = synthetic construct**

ctcctccctt tctgcaccc gtacccccgt ggtctttgaa taaagtctga gtgggcggc119

## RNA

|          |                                                              |                                                                                                                                                         |
|----------|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-50-3   | Extensión                                                    | 52                                                                                                                                                      |
| 3-50-4-1 | Características Localización/Calificadores                   | <b>source 1..52</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = a-1 globin 5'UTR</b><br><b>organism = synthetic construct</b> |
| 3-50-5   | Residuos                                                     |                                                                                                                                                         |
|          | agacgaacta gtattcttct ggtccccaca gactcagaga gaacccgccca cc52 |                                                                                                                                                         |

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### 3-51      Secuencias

|          |                                                                       |                                                                                                                                                     |
|----------|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-51-1   | Identificador de la secuencia                                         | 51                                                                                                                                                  |
| 3-51-2   | Tipo de molécula                                                      | DNA                                                                                                                                                 |
| 3-51-3   | Extensión                                                             | 317                                                                                                                                                 |
| 3-51-4-1 | Características Localización/Calificadores                            | <b>source 1..317</b><br><b>mol_type = other DNA</b><br><b>note = haplogroup U8b1b1 mitochondrion 3'UTR</b><br><b>organism = synthetic construct</b> |
| 3-51-5   | Residuos                                                              |                                                                                                                                                     |
|          | ctcgagctgg tactgcatgc acgcaatgct agctgcccct ttcccgctct gggtagccccg60  |                                                                                                                                                     |
|          | agtcctcccc gacctcgggt cccaggtatg ctccacctc cacctgcccc actcaccacc120   |                                                                                                                                                     |
|          | tctgctagtt ccagacacct gctatactaa tcgctagccg cgtcgctccc cagggttggt180  |                                                                                                                                                     |
|          | caatttcgtg ccagccacac cgagacctgg tccagagccc aagcacgccca cccccccacg240 |                                                                                                                                                     |

ggaaacagca gtgattaacc ttagcaata aacgaaagt taactaacag caatgcagct300  
caaaacgctt agcctag317

**3-52      Secuencias**

|          |                                                                    |                                                                                                                            |
|----------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| 3-52-1   | Identificador de la secuencia                                      | <b>52</b>                                                                                                                  |
| 3-52-2   | Tipo de molécula                                                   | <b>DNA</b>                                                                                                                 |
| 3-52-3   | Extensión                                                          | <b>110</b>                                                                                                                 |
| 3-52-4-1 | Características Localización/Calificadores                         | <b>source 1..110</b><br><b>mol_type = other DNA</b><br><b>note = A30L70 PolyA</b><br><b>organism = synthetic construct</b> |
| 3-52-5   | Residuos                                                           |                                                                                                                            |
|          | aaaaaaaaa aaaaaaaaaa aaaaaaaaaa gcatatgact aaaaaaaaaa aaaaaaaaaa60 |                                                                                                                            |
|          | aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa110           |                                                                                                                            |

**3-53      Secuencias**

|          |                                            |                                                                            |
|----------|--------------------------------------------|----------------------------------------------------------------------------|
| 3-53-1   | Identificador de la secuencia              | <b>53</b>                                                                  |
| 3-53-2   | Tipo de molécula                           | <b>DNA</b>                                                                 |
| 3-53-3   | Extensión                                  | <b>2014</b>                                                                |
| 3-53-4-1 | Características Localización/Calificadores | <b>source 1..2014</b><br><b>mol_type = other DNA</b><br><b>note = null</b> |

**note(en) = 5'UTR-Fluc-a globin 3'UTR-120A (Mod.-120A)**

**organism = synthetic construct**

3-53-5      Residuos

gggaaataag agagaaaaga agagtaagaa gaaatataag agccaccatg gaagacgcca60  
aaaacataaa gaaaggcccg gcgccattct atccgctgga agatggaacc gctggagagc120  
aactgcataa ggctatgaag agatacggc tggctcctgg aacaattgct ttacagatg180  
cacatcga ggtggacatc acttacgctg agtactcga aatgtccgtt cggttggcag240  
aagctatgaa acgatatggg ctgaatacaa atcacagaat cgtcgtatgc agtgaact300  
ctctcaatt cttatgccg gtgtgggcg cggtattat cggagttgca gttgcgccg360  
cgaacgacat ttataatgaa cgtgaattgc tcaacagtat gggcatttcg cagcctaccg420  
tggtgtcgt ttcaaaaag ggggtgcaa aaatttgaa cgtgcaaaa aagctccaa480  
tcacaaaa aattattatc atggattcta aaacggatta ccagggattt cagtcgatg540  
acacgttcgt cacatctcat ctacctccg gtttaatga atacgattt gtgccagagt600  
cctcgatag ggacaagaca attgactga tcatgaactc ctctggatct actggtctgc660  
ctaaagggtg cgctctgcct catagaactg cctgcgtgag attctcgcg gccagagatc720  
ctatttttg caatcaaac attccggata ctgcgattt aagtgtgtt ccattccatc780  
acggttttg aatgttact acactcgat attgatatg tggatttcga gtcgtctaa840  
tgtatagatt tgaagaagag ctgtttctga ggagcctca ggattacaag attcaaagt900  
cgctgctggt gccaaccta ttctcttct tcgcaaaaag cactctgatt gacaaatac960  
atttatcaa ttacacgaa attgctctg gtggcgctcc cctctctaag gaagtcgggg1020  
aagcgggtgc caagagggtc catctgccag gtatcaggca aggatatggg ctactgaga1080  
ctacatcagc tattctgatt acaccggagg gggatgataa accgggacgc gtcggtaaag1140

ttgttcatt tttgaagcg aaggttgtgg atctggatac cgggaaaacg ctgggcgtta1200  
atcaaagagg cgaactgtgt gtgagaggtc ctatgattat gtccggttat gtaaacaatc1260  
cggaagcgac caacgccttg attgacaagg atggatggct acattctgga gacatagctt1320  
actgggacga agacgaacac ttctcatcg ttgaccgcct gaagtctctg attaagtaca1380  
aaggctatca ggtggctccc gctgaattgg aatccatctt gctccaacac cccaacatct1440  
tcgacgcagg tgtcgagggt cttcccgacg atgacgccgg tgaactccc gccgccgttg1500  
ttgttttga gacgggaaag acgatgacgg aaaaagagat cgtggattac gtcgccagtc1560  
aagtaacaac cgcgaaaaag ttgcgcggag gagtgtgtt tgtggacgaa gtaccgaaag1620  
gtcttaccgg aaaactcgac gcaagaaaaa tcagagagat cctcataaag gccaagaagg1680  
gcggaaagat cgccgtggat tacaaggatg acgacgataa gtaagggccc accggttgat1740  
aataggctgg agcctcgggt gccatgcttc ttgcccttg ggcctcccc cagcccctcc1800  
tccccttct gcacccgtac ccccgtggtc tttgaataaa gtctgagtgg gcggcctcga1860  
gcgcgggaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa1920  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa1980  
aaaaaaatta ttgttaaac atttaaattc taga2014

|          |                                            |                                        |
|----------|--------------------------------------------|----------------------------------------|
| 3-54     | Secuencias                                 |                                        |
| 3-54-1   | Identificador de la secuencia              | 54                                     |
| 3-54-2   | Tipo de molécula                           | DNA                                    |
| 3-54-3   | Extensión                                  | 2004                                   |
| 3-54-4-1 | Características Localización/Calificadores | source 1..2004<br>mol_type = other DNA |

**note = null**

**note(en) = 5'UTR-Fluc-a globin 3'UTR-A30L70 (Mod.-A30L70)**

**organism = synthetic construct**

3-54-5    Residuos

gggaaataag agagaaaaga agagtaagaa gaaatataag agccaccatg gaagacgcca60  
aaaacataaa gaaaggcccg gcgccattct atccgctgga agatggaacc gctggagagc120  
aactgcataa ggctatgaag agatacgccc tggctcctgg aacaattgct ttacagatg180  
cacatatcga ggtggacatc acttacgctg agtactcga aatgtccgtt cggttggcag240  
aagctatgaa acgatatggg ctgaatacaa atcacagaat cgtcgtatgc agtgaaaact300  
ctcttcaatt ctttatgccg gtgttgggcg cggtatttat cggagtgcga gttgcgcccg360  
cgaacgacat ttataatgaa cgtgaattgc tcaacagtat gggcatttcg cagcctaccg420  
tgggttcgt ttcaaaaag ggggtgcaaa aaatttgaa cgtgcaaaaa aagctcccaa480  
tcatccaaaa aattattatc atggattcta aaacggatta ccagggattt cagtcgatgt540  
acacgttcgt cacatctcat ctacctcccg gttttaatga atacgatttt gtgccagagt600  
ccttcgatag ggacaagaca attgcactga tcatgaactc ctctggatct actggtctgc660  
ctaaagggtg cgtctgcct catagaactg cctgcgtgag attctcgcgt gccagagatc720  
ctatttttg caatcaaadc attccggata ctgcgatttt aagtgtgtt ccattccatc780  
acggttttg aatgttact acactcggat attgatatg tggatttcga gtcgtcttaa840  
tgtatagatt tgaagaagag ctgtttctga ggagcctca ggattacaag attcaaagt900  
cgctgctggt gccaacccta ttctcttct tcgcaaaaag cactctgatt gacaaatacg960  
atttatctaa ttacacgaa attgctctg gtggcgctcc cctctctaag gaagtcgggg1020  
aagcgggtgc caagagggtc catctgccag gtatcaggca aggatatggg ctactgaga1080

ctacatcagc tattctgatt acacccgagg gggatgataa accggg'gcg gtcggtaaag1140  
 ttgttcatt tttgaagcg aaggttgagg atctggatac cgggaaaacg ctgggcgta1200  
 atcaaagagg cgaactgtgt gtgagaggtc ctatgattat gtccggttat gtaacaatc1260  
 cggaagcgac caacgccttg atgacaagg atggatggct acattctgga gacatagctt1320  
 actgggacga agacgaacac ttctcatcg ttgaccgcct gaagtctctg attaagtaca1380  
 aaggctatca ggtggctccc gctgaattgg aatccatctt gctccaacac cccaacatct1440  
 tcgacgcagg tgcgcaggt ctcccgacg atgacgccgg tgaactccc gccgccgttg1500  
 ttgtttgga gcacggaaaag acgatgacgg aaaaagagat cgtggattac gtcgccagtc1560  
 aagtaacaac cgcgaaaaag ttgcgcggag gagggtgtt tggggacgaa gtaccgaaag1620  
 gtcttaccgg aaaactcgac gcaagaaaaa tcagagagat cctcataaag gccagaagg1680  
 gcggaaaagat cgccgtggat tacaaggatg acgacgataa gtaaggggccc accggttgat1740  
 aataggctgg agcctcgggt gccatgctt ttgccccttg ggcctcccc cagcccctcc1800  
 tccccttct gcacccgtac ccccggtgc ttgaataaa gtctgagtg ggcgcctcga1860  
 gccgcggaaa aaaaaaaaaa aaaaaaaaaa aaaaaaagca tatgactaaa aaaaaaaaaa1920  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaatta1980  
 ttgtttaaac atttaaattc taga2004

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### 3-55      **Secuencias**

|          |                                            |                       |
|----------|--------------------------------------------|-----------------------|
| 3-55-1   | Identificador de la secuencia              | <b>55</b>             |
| 3-55-2   | Tipo de molécula                           | <b>DNA</b>            |
| 3-55-3   | Extensión                                  | <b>2206</b>           |
| 3-55-4-1 | Características Localización/Calificadores | <b>source 1..2206</b> |

**mol\_type = other DNA**

**note = null**

**note(en) = a-1-globin 5'UTR-Fluc-haplogroup U8b1b1 mitochondrion 3'UTR-A30L70 (BioN.)**

**organism = synthetic construct**

3-55-5    Residuos

agacgaacta gtattcttct ggtccccaca gactcagaga gaacccgccca ccatggaaga60  
cgccaaaaac ataaagaaag gcccgggccc attctatccg ctggaagatg gaaccgctgg120  
agagcaactg cataaggcta tgaagagata cgccctgggt cctggaacaa ttgcttttac180  
agatgcacat atcgagggtg acatcactta cgctgagtac ttcgaaatgt ccgttcgggt240  
ggcagaagct atgaaacgat atgggctgaa tacaatcac agaatcgtcg tatgcagtga300  
aaactctctt caattcttta tgccgggtgt gggcgcgtta ttatcggag ttgcagttgc360  
gcccgcgaac gacattata atgaacgtga attgctcaac agtatgggca ttcgcagcc420  
taccgtggtg ttcgtttcca aaaaggggtt gcaaaaaatt tgaacgtgc aaaaaaagct480  
cccaatcatc caaaaaatta ttatcatgga ttctaaaacg gattaccagg gatttcagtc540  
gatgtacacg ttcgtcacat ctcatctacc tcccggtttt aatgaatacg atttgtgcc600  
agagtccttc gatagggaca agacaattgc actgatcatg aactcctctg gatctactgg660  
tctgcctaaa ggtgtcgctc tgcctcatag aactgcctgc gtgagattct cgcattgccag720  
agatcctatt ttggcaatc aaatcattcc ggatactgcg attttaagtg ttgttcatt780  
ccatcacggt ttggaatgt ttactacact cggatatttg atatgtggat ttcgagtcgt840  
cttaatgtat agatttgaag aagagctgtt tctgaggagc ctacaggatt acaagattca900  
aagtcgcgtg ctggtgccaa ccctattctc ctcttcgcc aaaagcactc tgattgacaa960  
atacgattta tctaatttac acgaaattgc ttctggtggc gctcccctct ctaaggaagt1020

cggggaagcg gttgccaaga ggttccatct gccaggtatc aggcaaggat atgggctcac1080  
 tgagactaca tcagctattc tgattacacc cgagggggat gataaaccgg gcgcggctcgg1140  
 taaagttgtt ccatttttg aagcgaaggt tgtggatctg gataccggga aaacgctggg1200  
 cgttaatcaa agaggcgaac tgtgtgtgag aggtcctatg attatgtccg gttatgtaa1260  
 caatccggaa gcgaccaacg ccttgattga caaggatgga tggctacatt ctggagacat1320  
 agcttactgg gacgaagacg aacacttctt catcgttgac cgcctgaagt ctctgattaa1380  
 gtacaaaggc tatcaggtgg ctcccgtga attggaatcc atcttgctcc aacaccccaa1440  
 catcttcgac gcaggtgtcg caggctctcc cgacgatgac gccggtgaac ttccgccgc1500  
 cgttgtgtt ttggagcacg gaaagacgat gacggaaaaa gagatcgtgg attacgtcg1560  
 cagtcaagta acaaccgca aaaagttgcg cgaggaggt gtgtttgtgg acgaagtacc1620  
 gaaaggtctt accgaaaaac tcgacgcaag aaaaatcaga gagatcctca taaaggccaa1680  
 gaagggcgga aagatcgccg tggattacaa ggatgacgac gataagtaag ggcccaccgg1740  
 ctcgagctgg tactgcatgc acgcaatgct agctgcccct ttccgtcct gggtagcccg1800  
 agtctcccc gacctcgggt cccaggtatg ctccacctc cacctgcccc actcaccacc1860  
 tctgctagtt ccagacacct gctatactaa tcgctagccg cgtcgctccc cagggttgg1920  
 caatttcgtg ccagccacac cgagacctgg tccagagccc aagcacgcca cccccacg1980  
 ggaaacagca gtgattaacc tttagcaata aacgaaagt taactaacag caatgcagct2040  
 caaacgctt agcctagctc gagccgcgga aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa2100  
 catatgacta aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa2160  
 aaaaaaaaaa aaaaaaaaaa tattgttaa acatttaaat tctaga2206

|          |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-56-1   | Identificador de la secuencia              | 56                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 3-56-2   | Tipo de molécula                           | DNA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 3-56-3   | Extensión                                  | 2411                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 3-56-4-1 | Características Localización/Calificadores | <p>source 1..2411</p> <p>mol_type = other DNA</p> <p>note = 5'UTR-Fluc- ACTG1 3'UTR-120A (B1)</p> <p>organism = synthetic construct</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 3-56-5   | Residuos                                   | <p>gggaaataag agagaaaaga agagtaagaa gaaatataag agccaccatg gaagacgcca60</p> <p>aaaacataaa gaaaggcccc gcgccattct atccgctgga agatggaacc gctggagagc120</p> <p>aactgcataa ggctatgaag agatacgccc tggctcctgg aacaattgct ttacagatg180</p> <p>cacatatcga ggtggacatc acttacgctg agtactcga aatgtccgtt cggttgacag240</p> <p>aagctatgaa acgatatggg ctgaatacaa atcacagaat cgtcgtatgc agtgaaaact300</p> <p>ctctcaatt cttatgccg gtgtgggccc cggtatttat cggagttgca gttgcgcccc360</p> <p>cgaacgacat ttataatgaa cgtgaattgc tcaacagtat gggcatttcg cagcctaccg420</p> <p>tgggtgtcgt ttcaaaaag ggggtgcaaa aaattttgaa cgtgcaaaaa aagctcccaa480</p> <p>tcatcaaaaa aattattatc atggattcta aaacggatta ccagggattt cagtcgatgt540</p> <p>acacgttcgt cacatctcat ctacctccc gtttaataga atacgatttt gtgccagagt600</p> <p>ccttcgatag ggacaagaca attgcactga tcatgaactc ctctggatct actggtctgc660</p> <p>ctaaagggtg cgctctgcct catagaactg cctgcgtgag attctcgcat gccagagatc720</p> <p>ctatttttgg caatcaaac attccggata ctgcgatttt aagtgtgtt ccattccatc780</p> <p>acggttttgg aatgtttact acactcggat attgatatg tggatttcga gtcgtcttaa840</p> |

tgtatagatt tgaagaagag ctgtttctga ggagcctca ggattacaag attcaaagt900  
cgctgctggt gccaaccta ttctcttct tcgccaaaag cactctgatt gacaaatacg960  
atttatctaa ttacacgaa attgctctg gtggcgctcc cctctctaag gaagtcgggg1020  
aagcgggtgc caagagggtc catctgccag gtatcaggca aggatatggg ctactgaga1080  
ctacatcagc tattctgatt acacccgagg gggatgataa accgggcgcg gtcggtaaag1140  
ttgttcatt tttgaagcg aaggttgtg atctggatac cgggaaaacg ctgggcgtta1200  
atcaaagagg cgaactgtgt gtgagaggtc ctatgattat gtccggttat gtaaacaatc1260  
cggaagcgac caacgccttg attgacaagg atggatggct acattctgga gacatagctt1320  
actgggacga agacgaacac ttctcatcg ttgaccgcct gaagtctctg attaagtaca1380  
aaggctatca ggtggctccc gctgaattgg aatccatctt gtcacaacac cccaacatct1440  
tcgacgcagg tgctgcaggt cttcccgcag atgacgccgg tgaactccc gccgccgttg1500  
ttgttttga gcacggaaaag acgatgacgg aaaaagagat cgtggattac gtcgccagtc1560  
aagtaacaac cgcgaaaaag ttgctcgagg gagttgtgtt tgtggacgaa gtaccgaaag1620  
gtcttaccgg aaaactcgac gcaagaaaaa tcagagagat cctcataaag gccagaagg1680  
gcggaaagat cgccgtggat tacaaggatg acgacgataa gtaagggccc accggccgac1740  
tacctcatga agatcctcac tgagcgaggc tacagctca ccaccacggc cgagcgggaa1800  
atcgtgcgcg acatcaagga gaagctgtgc tacgtcgccc tggacttca gcaggagatg1860  
gccaccgccg catcctctc ttctctggag aagagctacg agctgcccga tggcagggtc1920  
atcaccattg gcaatgagcg gttccggtgt ccggaggcgc tgtccagcc ttcttctg1980  
ggtatggaat ctgctggcat ccacgagacc acctcaact ccatcatgaa gtgtgacgtg2040  
gacatccga aagacctgta cgccaacacg gtgctgtcgg gcggcaccac catgtacccg2100  
ggcattgccg acaggatgca gaaggagatc accgccctgg cgcccagcac catgaagatc2160

aagatcatcg caccgccaga gcgcaagtac tcggtgtgga tcggtggctc catcctggcc2220  
tcactgtcca cttccagca gatgtggatt agctcgagcc gcggaaaaaa aaaaaaaaaa2280  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa2340  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaattattg tttaaacatt2400  
taaattctag a2411

**3-57      Secuencias**

|          |                                            |                                                                                                                                                 |
|----------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-57-1   | Identificador de la secuencia              | 57                                                                                                                                              |
| 3-57-2   | Tipo de molécula                           | DNA                                                                                                                                             |
| 3-57-3   | Extensión                                  | 2027                                                                                                                                            |
| 3-57-4-1 | Características Localización/Calificadores | source 1..2027<br>mol_type = other DNA<br>note = null<br>note(en) = ACTG1 5'UTR-Fluc-a globin 3'UTR-120A (A1)<br>organism = synthetic construct |

3-57-5      Residuos

ctctcgact ctgttcttc gccgctccgc cgtcgcgtt ctctgccggt cgcagccacc60  
atggaagacg caaaaacat aaagaaaggc ccggcgccat tctatccgct ggaagatgga120  
accgctggag agcaactgca taaggctatg aagagatacg ccctggttcc tgaacaatt180  
gcttttacag atgcacatat cgaggctggac atcacttacg ctgagtactt cgaaatgtcc240  
gttcggttgg cagaagctat gaaacgatat gggctgaata caaatcacag aatcgtcgta300  
tgcagtgaaa actctcttca attctttatg ccggtgttgg gcgcgttatt tatcggagtt360

gcagttgcgc ccgcgaacga cattataat gaacgtgaat tgctcaacag tatgggcatt420  
tcgcagccta ccgtgggtgtt cgtttccaaa aaggggttgc aaaaaattt gaacgtgcaa480  
aaaaagctcc caatcatcca aaaaattatt atcatggatt ctaaacgga ttaccaggga540  
tttcagtcga tgtacacgtt cgtcacatct catctacctc ccggttttaa tgaatacga600  
tttgtccag agtccttcga tagggacaag acaattgcac tgatcatgaa ctctctgga660  
tctactggtc tgcctaaagg tgcgctctg cctcatagaa ctgcctgcgt gagattctcg720  
catgccagag atcctatttt tggcaatcaa atcattccgg atactgcgat ttaagtgt780  
gttccattcc atcacggttt tggaatgtt actacactcg gatatttgat atgtggatt840  
cgagtcgtct taatgtatag attgaagaa gagctgtttc tgaggagcct tcaggattac900  
aagattcaaa gtgcgctgct ggtgccaacc ctattctcct tcttcgcaa aagcactctg960  
attgacaaat acgattatc taatttacac gaaattgctt ctggtggcgc tcccctctct1020  
aaggaagtgc gggaagcggg tgccaagagg ttccatctgc caggatatcag gcaaggatat1080  
gggctcactg agactacatc agctattctg attacaccg aggggggatga taaaccgggc1140  
gcggtcggta aagttgttcc atttttgaa gcgaagggtg tggaatcga taccgggaaa1200  
acgctgggcg ttaatcaaag aggcgaactg tgttgagag gtcctatgat tatgtccgg1260  
tatgtaaaca atccggaagc gaccaacgcc ttgattgaca aggatggatg gctacattct1320  
ggagacatag ctactggga cgaagacgaa cacttctca tcgtgaccg cctgaagtct1380  
ctgattaagt acaaaggcta tcaggtggct cccgctgaat tggaatccat ctgtctcaa1440  
caccccaaca tctcgacgc aggtgtcgca ggtcttccc acgatgacgc cgtgaaact1500  
cccgccgccg ttgtgtttt ggagcacgga aagacgatga cgaaaaaga gatcgtggat1560  
tacgtcgcca gtcaagtaac aaccgcgaaa aagttgcgcg gaggagtgt gttgtggac1620  
gaagtaccga aaggtcttac cggaaaactc gacgcaagaa aaatcagaga gatcctcata1680

aaggccaaga agggcggaag gatcgccgtg gattacaagg atgacgacga taagtaaggg1740  
cccaccggtt gataataggc tggagcctcg gtggccatgc ttctgcccc ttggcctcc1800  
ccccagcccc tcctcccctt cctgcacccg tacccccgtg gtctttgaat aaagtctgag1860  
tgggcggcct cgagccgctg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa1920  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa1980  
aaaaaaaaaa aaaaaaaaaa ttattgtta aacatttaa ttctaga2027

|          |                                                                       |                                                                                                                                     |
|----------|-----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| 3-58     | Secuencias                                                            |                                                                                                                                     |
| 3-58-1   | Identificador de la secuencia                                         | 58                                                                                                                                  |
| 3-58-2   | Tipo de molécula                                                      | RNA                                                                                                                                 |
| 3-58-3   | Extensión                                                             | 517                                                                                                                                 |
| 3-58-4-1 | Características Localización/Calificadores                            | source 1..517<br>mol_type = other RNA<br>note = null<br>note(en) = B1 mRNA sequence (ACTG1 3'UTR)<br>organism = synthetic construct |
| 3-58-5   | Residuos                                                              |                                                                                                                                     |
|          | ccgactacct catgaagatc ctactgagc gaggctacag cttaccacc acggccgagc60     |                                                                                                                                     |
|          | gggaaatcgt gcgcgacatc aaggagaagc tgtgtctacgt cgccttggaac ttgagcagg120 |                                                                                                                                     |
|          | agatggccac cgccgcatcc tcctcttc tggagaagag ctacgagctg cccgatggcc180    |                                                                                                                                     |
|          | aggtcatcac cattggcaat gagcgggtcc ggtgtccgga ggcgctgttc cagccttct240   |                                                                                                                                     |
|          | tcctgggtat ggaatcttg ggcattcac agaccacct caactccatc atgaagtgtg300     |                                                                                                                                     |

acgtggacat ccgcaaagac ctgtacgcca acacggtgct gtcgggcggc accaccatgt360  
acccgggcat tgccgacagg atgcagaagg agatcaccgc cctggcgccc agcaccatga420  
agatcaagat catcgacccc ccagagcgca agtactcggg gtggatcggg ggctccatcc480  
tggcctcact gtccaccttc cagcagatgt ggattag517

**3-59      Secuencias**

|          |                                                                      |                                                                                                                                                                          |
|----------|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-59-1   | Identificador de la secuencia                                        | <b>59</b>                                                                                                                                                                |
| 3-59-2   | Tipo de molécula                                                     | <b>RNA</b>                                                                                                                                                               |
| 3-59-3   | Extensión                                                            | <b>282</b>                                                                                                                                                               |
| 3-59-4-1 | Características Localización/Calificadores                           | <b>source 1..282</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = B2 mRNA sequence (ATP6V0B 3'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-59-5   | Residuos                                                             |                                                                                                                                                                          |
|          | atgatatgtg tgggtggggc cgtgcctcac tttatttat tgctggttt cctgggacag60    |                                                                                                                                                                          |
|          | ctggagctgt gtcccttagc cttcagagg ctggtgttc agggccctcc ctgcactccc120   |                                                                                                                                                                          |
|          | ctcttgctgc gtgttgattt ggaggcactg cagtccaggc cgagtcctca gtgcggggag180 |                                                                                                                                                                          |
|          | caggctgctg ctgctgactg tgtgcagctg cgcacctgtg tccccacct ccaccctcaa240  |                                                                                                                                                                          |
|          | cccatcttc tagtgtttgt gaaataaact tggattttgt ct282                     |                                                                                                                                                                          |

**3-60      Secuencias**

|          |                                            |                                                                                                                                                                                                                                                                                                                                                                              |
|----------|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-60-1   | Identificador de la secuencia              | <b>60</b>                                                                                                                                                                                                                                                                                                                                                                    |
| 3-60-2   | Tipo de molécula                           | <b>RNA</b>                                                                                                                                                                                                                                                                                                                                                                   |
| 3-60-3   | Extensión                                  | <b>308</b>                                                                                                                                                                                                                                                                                                                                                                   |
| 3-60-4-1 | Características Localización/Calificadores | <b>source 1..308</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = B3 mRNA sequence (ATP6V0B 3'UTR)</b><br><b>organism = synthetic construct</b>                                                                                                                                                                                                     |
| 3-60-5   | Residuos                                   | gttgaagaac ttctcttac cgagcagccc gtaaccccct tttctccct cactgtgca60<br>ggagtctgct acaccatttt tgattgggc ttccgcttg atgtggcatg gtcctgacg120<br>gagacttcgc ccttcattgtg gtccaacctg ggcattggcc tagctatctc cctgtctgtg180<br>gttggggcag cctggggcat ctatattacc ggctcctcca tcattggtgg aggagtgaag240<br>gccccagga tcaagaccaa gaacctggtc agcatcatct tctgtgaggc tgtggccatc300<br>tacggcat308 |

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### 3-61      Secuencias

|          |                                            |                                                     |
|----------|--------------------------------------------|-----------------------------------------------------|
| 3-61-1   | Identificador de la secuencia              | <b>61</b>                                           |
| 3-61-2   | Tipo de molécula                           | <b>RNA</b>                                          |
| 3-61-3   | Extensión                                  | <b>226</b>                                          |
| 3-61-4-1 | Características Localización/Calificadores | <b>source 1..226</b><br><b>mol_type = other RNA</b> |

**organism = synthetic construct**

ggaagaagac atgctctaca gtgctcagtc tttaggtga ctatgctgt gacctttctt60  
atcagtatgg tcaggcagtc agagtttgc ttgactttt ctcacattt atggccattt120  
taacacgtgg caagggaag ctgctgaatg caaacacgat ctgaagagca gaaataaaat180  
tggaacttaa gccttagctt acctaaatct cattaagatt ctttt226

atgcaaaatc acctcctaaac cagaccactt tcttgactt gcctgttttg gccattagct60  
gccttaaacy ttaacagcac atttgatgc cttattctac aatgcagcgt gtttccctt120  
gcctttttg cactttggtg aattacgtgc ctccataacc tgaactgtgc cgactccaca180

aaacgattat gtactcttct gagatagaag atgctgttct tctgagagat acgttactct240  
ctccttgga tctgtggatt tgaagatggc tcctgccttc tcacgtggga atcagtgaag300  
tgtagaaaa ctgctgcaag acaacaaga ctccagtggg gtggtcagta ggagagcacg360  
ttcagagggg agagccatct caacagaatc gcaccaaact atacttcag gatgaatttc420  
ttcttctgc catcttttgg aataaatatt ttctccttt c461

**3-63      Secuencias**

|          |                                            |                                                                                                                                                                       |
|----------|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-63-1   | Identificador de la secuencia              | <b>63</b>                                                                                                                                                             |
| 3-63-2   | Tipo de molécula                           | <b>RNA</b>                                                                                                                                                            |
| 3-63-3   | Extensión                                  | <b>499</b>                                                                                                                                                            |
| 3-63-4-1 | Características Localización/Calificadores | <b>source 1..499</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = B6 mRNA sequence (CFL1 3'UTR)</b><br><b>organism = synthetic construct</b> |

**3-63-5      Residuos**

gccccttctg gcccctgcc tggagcatct ggcagcccca cacctgccct tgggggttgc60  
aggctgcccc ctctctgcca gaccggaggg gctgggggga tcccagcagg gggagggcaa120  
tcccttcacc ccagttgcca aacagacccc ccaccccctg gattttcctt ctccctccat180  
cccttgacgg ttctggcctt cccaaactgc tttgatctt ttgattcctc ttgggctgaa240  
gcagaccaag ttccccccag gcacccagc tgtgggggag cctgtatatt tttaacaac300  
atccccattc cccacctggg cctccccctt cccatgctgc caacttctaa ccgcaatagt360

gactctgtgc ttgtctgtt agttctgtgt ataatggaa tttgtggag atgaccctc420  
cctgtgccgg ctggttcctc tccctttcc cctggtcacg gctactcatg gaagcaggac480  
cagtaaggga ccttcgatt499

**3-64      Secuencias**

|          |                                                                      |                                                                                                                                                                       |
|----------|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-64-1   | Identificador de la secuencia                                        | <b>64</b>                                                                                                                                                             |
| 3-64-2   | Tipo de molécula                                                     | <b>RNA</b>                                                                                                                                                            |
| 3-64-3   | Extensión                                                            | <b>282</b>                                                                                                                                                            |
| 3-64-4-1 | Características Localización/Calificadores                           | <b>source 1..282</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = B7 mRNA sequence (CFL1 3'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-64-5   | Residuos                                                             |                                                                                                                                                                       |
|          | gccccttctg gcccctgcc tggagcatct ggcagcccca cacctgccct tgggggttgc60   |                                                                                                                                                                       |
|          | aggctgcccc ctctctgcca gaccggaggg gctgggggga tcccagcagg gggagggcaa120 |                                                                                                                                                                       |
|          | tcccttcacc ccagttgcca aacagacccc ccaccccctg gatttcctt ctccctccat180  |                                                                                                                                                                       |
|          | cccttgacgg ttctggcctt ccaaactgc tttgatctt ttgattcctc ttgggctgaa240   |                                                                                                                                                                       |
|          | gcagaccaag ttccccccag gcacccagc tgtgggggag cc282                     |                                                                                                                                                                       |

**3-65      Secuencias**

|        |                               |           |
|--------|-------------------------------|-----------|
| 3-65-1 | Identificador de la secuencia | <b>65</b> |
|--------|-------------------------------|-----------|

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                       |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-65-2   | Tipo de molécula                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>RNA</b>                                                                                                                                                            |
| 3-65-3   | Extensión                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>361</b>                                                                                                                                                            |
| 3-65-4-1 | Características Localización/Calificadores                                                                                                                                                                                                                                                                                                                                                                                                   | <b>source 1..361</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = B8 mRNA sequence (CFL1 3'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-65-5   | Residuos                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                       |
|          | gccccttctg gccccctgcc tggagcatct ggcagcccca cacctgccct tgggggttgc60<br>aggctgcccc ctctctgcca gaccggaggg gctgggggga tcccagcagg gggagggcaa120<br>tcccttcacc ccagttgcca aacagacccc ccacccctg gatttctt ctccctccat180<br>cccttgacgg ttctggcctt cccaaactgc tttgatctt ttgattcctc ttgggctgaa240<br>gcagaccaag ttccccag gcacccagc tgtgggggag cctgtatatt ttttaacaac300<br>atccccattc cccacctggt cctccccctt cccatgctgc caacttctaa ccgcaatagt360<br>g361 |                                                                                                                                                                       |

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### 3-66      Secuencias

|          |                                            |                                                     |
|----------|--------------------------------------------|-----------------------------------------------------|
| 3-66-1   | Identificador de la secuencia              | <b>66</b>                                           |
| 3-66-2   | Tipo de molécula                           | <b>RNA</b>                                          |
| 3-66-3   | Extensión                                  | <b>128</b>                                          |
| 3-66-4-1 | Características Localización/Calificadores | <b>source 1..128</b><br><b>mol_type = other RNA</b> |

**organism = synthetic construct**

gagatgctgg cctgcgctg cacctgcgcc tggctctgtc accgccatgc aactccatgc60  
ctatttactg gaaacctgtt atgccaaca gttgtaccac tgctaataaa tgaccagttt120  
acctgaaa128

**organism = synthetic construct**

agggaccac aggcgcgcc agcagctctc ggaagcgttg tatcgatta agttcaagga60  
gagctttgct gagatgaaca ggggctcgaa cgagtgaag acggttgtag gcggtgccat120  
gttcttcac gggttcaccg cgctcggtat catgtggcag aagcactatg ggctagcct180  
ccaagtggga ctacgaaaag aacgagtgga agaagtgaga gatgctggcc tgcgctgca240

cctgcgcctg gctctgtcac cgccatgcaa ctccatgcct attactgga aacctgttat300  
gccaaacagt tgtaccact319

**3-68      Secuencias**

|          |                                                                      |                                                                                                                                                                          |
|----------|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-68-1   | Identificador de la secuencia                                        | <b>68</b>                                                                                                                                                                |
| 3-68-2   | Tipo de molécula                                                     | <b>RNA</b>                                                                                                                                                               |
| 3-68-3   | Extensión                                                            | <b>303</b>                                                                                                                                                               |
| 3-68-4-1 | Características Localización/Calificadores                           | <b>source 1..303</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = B11 mRNA sequence (COX4I1 3'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-68-5   | Residuos                                                             |                                                                                                                                                                          |
|          | agaggacctt ctgcttttag ctattttgt tgctaacttt ttacaaacaa agggctaatt60   |                                                                                                                                                                          |
|          | ttaaaatgtc agtgttgta gtgtgcagaa accgtgtgtt tgagcgggtg ttgagtggca120  |                                                                                                                                                                          |
|          | ggtggctctg ctgacctggt ggctggtgtg tcgggaggat ttaacctgtg tgagggattg180 |                                                                                                                                                                          |
|          | gcctagaaac aacctgttga gatagtcttg ccccataacc tgtctcacac cgtagtgtac240 |                                                                                                                                                                          |
|          | ggccccctcc cgcaaagctt tgacaaagag tgggtggcca agcagaccaa gaggatgctg300 |                                                                                                                                                                          |
|          | gac303                                                               |                                                                                                                                                                          |

**3-69      Secuencias**

|        |                               |           |
|--------|-------------------------------|-----------|
| 3-69-1 | Identificador de la secuencia | <b>69</b> |
|--------|-------------------------------|-----------|

|          |                                            |                                                                                                                                                                        |
|----------|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-69-2   | Tipo de molécula                           | RNA                                                                                                                                                                    |
| 3-69-3   | Extensión                                  | 232                                                                                                                                                                    |
| 3-69-4-1 | Características Localización/Calificadores | <b>source 1..232</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = B12 mRNA sequence (CTSB 3'UTR)</b><br><b>organism = synthetic construct</b> |

3-69-5    Residuos

tctgccgtgg gcctgtcgtg ccagtcctgg gggcgagatc gggagaatca cgtcctggaa60

ctgcatgttc ttgcgactct tgggactca tcctaacttc tcgctgcccc agccatgttt120

tcaaccatgg catccctccc ccaattagtt ccctgtcatc ctgtcaacc ttctctgtaa180

gtgcctggta agcttgcct tgcttaagaa ctcaaaacat agctgtgctc ta232

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### 3-70    Secuencias

|          |                                            |                                                                                                                                                                           |
|----------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-70-1   | Identificador de la secuencia              | 70                                                                                                                                                                        |
| 3-70-2   | Tipo de molécula                           | RNA                                                                                                                                                                       |
| 3-70-3   | Extensión                                  | 115                                                                                                                                                                       |
| 3-70-4-1 | Características Localización/Calificadores | <b>source 1..115</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = B13 mRNA sequence (FAM166A 3'UTR)</b><br><b>organism = synthetic construct</b> |

## Residuos

aaatgcttta atggtggtgt ctgtacagca tggatgtgga cagggaaaac agcaagtga60

cacagtggga caggccacag gacaggctgg gagtgaataa agagttcaca ctgct115

### 3-71 Secuencias

3-71-1      Identificador de la secuencia

71

3-71-2 Tipo de molécula

## RNA

3-71-3 Extensión

196

### 3-71-4-1 Características Localización/Calificadores

source 1..196

**mol\_type = other RNA**

```
note = null
```

**note(en) = B14 mRNA sequence (NDUFB9 3'UTR)**

**organism = synthetic construct**

3-71-5 Residuos

tatctaagtg tatcaattta acatttataa tcaccttaca agtaagttaa agtgcattcc60

ctggtcgttt tggctttgtc ttgattttg cttcagatct ccttctcttt agtcctttgt120

ctgacttttt tgccttcttg ctatactttc cctcaacctg cctctccact attttcttag180

gcattttca gtcatg196

### 3-72 Secuencias

3-72-1      Identificador de la secuencia

72

3-72-2 Tipo de molécula

## RNA

|          |                                            |                                                                                                                                                                       |
|----------|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-72-3   | Extensión                                  | 54                                                                                                                                                                    |
| 3-72-4-1 | Características Localización/Calificadores | <b>source 1..54</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = A1 mRNA sequence (ACTG1 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-72-5   | Residuos                                   |                                                                                                                                                                       |
|          | ctctcgca                                   | ctctcttcc gccgctccgc cgtcgcggtt ctctgccggt cgca54                                                                                                                     |

### 3-73 Secuencias

|          |                                            |                                                                                                                                                                          |
|----------|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-73-1   | Identificador de la secuencia              | 73                                                                                                                                                                       |
| 3-73-2   | Tipo de molécula                           | RNA                                                                                                                                                                      |
| 3-73-3   | Extensión                                  | 185                                                                                                                                                                      |
| 3-73-4-1 | Características Localización/Calificadores | <b>source 1..185</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = A2 mRNA sequence (ATP6V0B 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-73-5   | Residuos                                   |                                                                                                                                                                          |
|          | gggcggg                                    | ggcgggacgg tggacgctgg gacgcgttg tagctccggc60                                                                                                                             |
|          | cccgcggttc                                 | cgacccccgc cgccgtcgcc gccatgacgg ggctagcact gctctactcc120                                                                                                                |
|          | ggggtcttcg                                 | tggcctctg ggccgtcgcg ctggccgtgg gttcctgacg gagacttcgc180                                                                                                                 |

ccttc185

**3-74      Secuencias**

|          |                                                                     |                                                                                                                                                                         |
|----------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-74-1   | Identificador de la secuencia                                       | <b>74</b>                                                                                                                                                               |
| 3-74-2   | Tipo de molécula                                                    | <b>RNA</b>                                                                                                                                                              |
| 3-74-3   | Extensión                                                           | <b>81</b>                                                                                                                                                               |
| 3-74-4-1 | Características Localización/Calificadores                          | <b>source 1..81</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = A3 mRNA sequence (ATP6V0B 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-74-5   | Residuos                                                            |                                                                                                                                                                         |
|          | agactgcggg acggacggtg gacgctggga cgcgtttgta gctccggccc cgccgttccg60 |                                                                                                                                                                         |
|          | acccccgccg ccgtcgccgc c81                                           |                                                                                                                                                                         |

**3-75      Secuencias**

|          |                                            |                                                                          |
|----------|--------------------------------------------|--------------------------------------------------------------------------|
| 3-75-1   | Identificador de la secuencia              | <b>75</b>                                                                |
| 3-75-2   | Tipo de molécula                           | <b>RNA</b>                                                               |
| 3-75-3   | Extensión                                  | <b>30</b>                                                                |
| 3-75-4-1 | Características Localización/Calificadores | <b>source 1..30</b><br><b>mol_type = other RNA</b><br><b>note = null</b> |

**organism = synthetic construct**

ggggtagggg ttggcgctca ggcggcgacc30

3-76-1      Identificador de la secuencia

76

## RNA

80

source 1..80

**mol\_type = other RNA**

```
note = null
```

**note(en) = A5 mRNA sequence (ATP6V0E1 5'UTR)**

**organism = synthetic construct**

gtcacgcggt cagctattga cacttctggt tgggatccga gtgaggcgac ggggtagggg60

ttggcgctca ggcggcgacc80

3-77-1      Identificador de la secuencia

77

## RNA

234

3-77-4-1

Características Localización/Calificadores

source 1..234

mol\_type = other RNA

note = null

note(en) = A6 mRNA sequence (CFL1 5'UTR)

organism = synthetic construct

3-77-5

Residuos

ggccggcggg aagactccgt tacccagcga gcgaggcggc ggcgcagggc cagcggactc60

cattcccgt cggctcgcgg tgggagcgcc ggaagccgc cccacccctc attgtcggc120

tcctactaaa cggaaggggc cgggagaggc cgcgttcagt cgggtcccgg cagcggctgc180

agcgctctcg tcttctcggg ctctcgggtgc cctctcctt tcgttccgg aaac234

3-78

Secuencias

3-78-1

Identificador de la secuencia

78

3-78-2

Tipo de molécula

RNA

3-78-3

Extensión

128

3-78-4-1

Características Localización/Calificadores

source 1..128

mol\_type = other RNA

note = null

note(en) = A7 mRNA sequence (CFL1 5'UTR)

organism = synthetic construct

3-78-5

Residuos

ctcctggctc gggcaccccg aagcacgacg cagagtagga agagttaaa gacctcgagg60

cctctgggca cttgagtttg gcctccggtg tggctgtctc tgatggtgtc atcaagggtg120  
tcaacgac128

**3-79      Secuencias**

|          |                                                                       |                                                                                                                                                                       |
|----------|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-79-1   | Identificador de la secuencia                                         | <b>79</b>                                                                                                                                                             |
| 3-79-2   | Tipo de molécula                                                      | <b>RNA</b>                                                                                                                                                            |
| 3-79-3   | Extensión                                                             | <b>151</b>                                                                                                                                                            |
| 3-79-4-1 | Características Localización/Calificadores                            | <b>source 1..151</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = A8 mRNA sequence (CFL1 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-79-5   | Residuos                                                              |                                                                                                                                                                       |
|          | acgtggccgg cttctctgc agttccgggg agtttggggg accagattta cttggattg60     |                                                                                                                                                                       |
|          | cccctccctc tcttggtctg ggcaccccgga agcacgacgc agagcctccg gtgtgggtgt120 |                                                                                                                                                                       |
|          | ctctgatggt gtcataagg tgtcaacga c151                                   |                                                                                                                                                                       |

**3-80      Secuencias**

|          |                                            |                     |
|----------|--------------------------------------------|---------------------|
| 3-80-1   | Identificador de la secuencia              | <b>80</b>           |
| 3-80-2   | Tipo de molécula                           | <b>RNA</b>          |
| 3-80-3   | Extensión                                  | <b>70</b>           |
| 3-80-4-1 | Características Localización/Calificadores | <b>source 1..70</b> |

|        |                                                                    |                                                   |
|--------|--------------------------------------------------------------------|---------------------------------------------------|
|        |                                                                    | <b>mol_type = other RNA</b>                       |
|        |                                                                    | <b>note = null</b>                                |
|        |                                                                    | <b>note(en) = A9 mRNA sequence (COX4I1 5'UTR)</b> |
|        |                                                                    | <b>organism = synthetic construct</b>             |
| 3-80-5 | Residuos                                                           |                                                   |
|        | gcggccttgc tctctccgg tcgcgggaca ccgggtgtag agggcggtcg cggcgggcag60 |                                                   |
|        | tggcggcaga70                                                       |                                                   |

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**3-81      Secuencias**

|          |                                                      |                                                    |
|----------|------------------------------------------------------|----------------------------------------------------|
| 3-81-1   | Identificador de la secuencia                        | <b>81</b>                                          |
| 3-81-2   | Tipo de molécula                                     | <b>RNA</b>                                         |
| 3-81-3   | Extensión                                            | <b>46</b>                                          |
| 3-81-4-1 | Características Localización/Calificadores           | <b>source 1..46</b>                                |
|          |                                                      | <b>mol_type = other RNA</b>                        |
|          |                                                      | <b>note = null</b>                                 |
|          |                                                      | <b>note(en) = A10 mRNA sequence (COX4I1 5'UTR)</b> |
|          |                                                      | <b>organism = synthetic construct</b>              |
| 3-81-5   | Residuos                                             |                                                    |
|          | gggacaccgg gtgtagaggg cggtcgcggc gggcagtggc ggcaga46 |                                                    |

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**3-82      Secuencias**

|        |                               |           |
|--------|-------------------------------|-----------|
| 3-82-1 | Identificador de la secuencia | <b>82</b> |
|--------|-------------------------------|-----------|

|          |                                                                    |                                                                                                                                                                         |
|----------|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-82-2   | Tipo de molécula                                                   | RNA                                                                                                                                                                     |
| 3-82-3   | Extensión                                                          | 71                                                                                                                                                                      |
| 3-82-4-1 | Características Localización/Calificadores                         | <b>source 1..71</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = A11 mRNA sequence (COX4I1 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-82-5   | Residuos                                                           |                                                                                                                                                                         |
|          | cgcggccttg ctctctccg gtcgcgggac accgggtgta gagggcggtc gcggcgggca60 |                                                                                                                                                                         |
|          | gtggcggcag a71                                                     |                                                                                                                                                                         |

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### 3-83      Secuencias

|          |                                                                   |                                                                                                                                                                        |
|----------|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-83-1   | Identificador de la secuencia                                     | 83                                                                                                                                                                     |
| 3-83-2   | Tipo de molécula                                                  | RNA                                                                                                                                                                    |
| 3-83-3   | Extensión                                                         | 137                                                                                                                                                                    |
| 3-83-4-1 | Características Localización/Calificadores                        | <b>source 1..137</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = A12 mRNA sequence (CUSB 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-83-5   | Residuos                                                          |                                                                                                                                                                        |
|          | ggccggggct ggcccaggct acggcggtc cagggctccg gcaaccgctc cggaacgcc60 |                                                                                                                                                                        |

aaccgctccg ctgcgcgcag gctgggctgc aggctctcgg ctgcagcgct ggggtggatct120  
aggatccggc ttccaac137

**3-84      Secuencias**

|          |                                                                |                                                                                                                                                                          |
|----------|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-84-1   | Identificador de la secuencia                                  | <b>84</b>                                                                                                                                                                |
| 3-84-2   | Tipo de molécula                                               | <b>RNA</b>                                                                                                                                                               |
| 3-84-3   | Extensión                                                      | <b>55</b>                                                                                                                                                                |
| 3-84-4-1 | Características Localización/Calificadores                     | <b>source 1..55</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = A13 mRNA sequence (FAM166A 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-84-5   | Residuos                                                       |                                                                                                                                                                          |
|          | aagggagctg gatgccggga gggactggag ccagcaaggc cagagtgaag gcaaa55 |                                                                                                                                                                          |

**3-85      Secuencias**

|          |                                            |                                                                          |
|----------|--------------------------------------------|--------------------------------------------------------------------------|
| 3-85-1   | Identificador de la secuencia              | <b>85</b>                                                                |
| 3-85-2   | Tipo de molécula                           | <b>RNA</b>                                                               |
| 3-85-3   | Extensión                                  | <b>56</b>                                                                |
| 3-85-4-1 | Características Localización/Calificadores | <b>source 1..56</b><br><b>mol_type = other RNA</b><br><b>note = null</b> |

**organism = synthetic construct**

gcagcaggcg tgcagttcc cggtctccg cgcggccggg gaaggtcagc gccgta56

## 86

## RNA

68

source 1..68

**mol\_type = other RNA**

```
note = null
```

**note(en) = A15 mRNA sequence (CHCHD10 5'UTR)**

**organism = synthetic construct**

ggcatttgtc cccgcgacag caccgctgcc gccgtctcta aggtcgcccc ggtcccaccg60

ccgccacc68

## 87

## RNA

46

3-87-4-1 Características Localización/Calificadores

source 1..46

mol\_type = other RNA

note = null

note(en) = A16 mRNA sequence (CHCHD10 5'UTR)

organism = synthetic construct

3-87-5 Residuos

ccgctgccgc cgtctctaag gtcgccggg tcccaccgcc gccacc46

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**3-88 Secuencias**

3-88-1 Identificador de la secuencia

88

3-88-2 Tipo de molécula

RNA

3-88-3 Extensión

41

3-88-4-1 Características Localización/Calificadores

source 1..41

mol\_type = other RNA

note = null

note(en) = A17 mRNA sequence (SLC38A2 5'UTR)

organism = synthetic construct

3-88-5 Residuos

atgtcttttt tgtgtgttg tttcatggt attcctatga a41

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**3-89 Secuencias**

3-89-1 Identificador de la secuencia

89

|          |                                                        |                                                                                                                                                                          |
|----------|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-89-2   | Tipo de molécula                                       | RNA                                                                                                                                                                      |
| 3-89-3   | Extensión                                              | 48                                                                                                                                                                       |
| 3-89-4-1 | Características Localización/Calificadores             | <b>source 1..48</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = A18 mRNA sequence (NDUFA11 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-89-5   | Residuos                                               |                                                                                                                                                                          |
|          | gcttcccgag ctggcggggt ccgtggtgcg ggatcgagat tgcgggct48 |                                                                                                                                                                          |

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### 3-90      Secuencias

|          |                                                                      |                                                                                                                                                                         |
|----------|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-90-1   | Identificador de la secuencia                                        | 90                                                                                                                                                                      |
| 3-90-2   | Tipo de molécula                                                     | RNA                                                                                                                                                                     |
| 3-90-3   | Extensión                                                            | 69                                                                                                                                                                      |
| 3-90-4-1 | Características Localización/Calificadores                           | <b>source 1..69</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = A19 mRNA sequence (NDUFV3 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-90-5   | Residuos                                                             |                                                                                                                                                                         |
|          | ggcggctgtt caggcgcggg tgcgcgcgca gctgctgtgg ccctgcttgg tgcgcccgcct60 |                                                                                                                                                                         |
|          | gtcaccgcc69                                                          |                                                                                                                                                                         |

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**3-91      Secuencias**

|          |                                                                      |                                                                                                                                                                         |
|----------|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-91-1   | Identificador de la secuencia                                        | <b>91</b>                                                                                                                                                               |
| 3-91-2   | Tipo de molécula                                                     | <b>RNA</b>                                                                                                                                                              |
| 3-91-3   | Extensión                                                            | <b>128</b>                                                                                                                                                              |
| 3-91-4-1 | Características Localización/Calificadores                           | <b>source 1..128</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = A20 mRNA sequence (PRDX5 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-91-5   | Residuos                                                             |                                                                                                                                                                         |
|          | cgcgctgcg cagtgaggc ggcccaggcc cgcctccgc aggggtgctgc cgctgtgccg60    |                                                                                                                                                                         |
|          | ctagcggtgc cccgcctgct gcggtggcac cagccaggag gcggagtgga agtggccgtg120 |                                                                                                                                                                         |
|          | gggcgggt128                                                          |                                                                                                                                                                         |

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**3-92      Secuencias**

|          |                                            |                                                                          |
|----------|--------------------------------------------|--------------------------------------------------------------------------|
| 3-92-1   | Identificador de la secuencia              | <b>92</b>                                                                |
| 3-92-2   | Tipo de molécula                           | <b>RNA</b>                                                               |
| 3-92-3   | Extensión                                  | <b>59</b>                                                                |
| 3-92-4-1 | Características Localización/Calificadores | <b>source 1..59</b><br><b>mol_type = other RNA</b><br><b>note = null</b> |

**organism = synthetic construct**

cagcagatgg ggactagagg ccgcactgct atccacagcc tctcttctca cccccaggc59

## 93

## RNA

68

source 1..68

**mol\_type = other RNA**

```
note = null
```

**note(en) = A22 mRNA sequence (GUK1 5'UTR)**

**organism = synthetic construct**

gctggccggg ctggctgcgg ccgccctggg ccgggccccca ccggacgcct ctcttctcac60

ccccaggc68

## 94

## RNA

96

3-94-4-1

Características Localización/Calificadores

source 1..96

mol\_type = other RNA

note = null

note(en) = A23 mRNA sequence (GUK1 5'UTR)

organism = synthetic construct

3-94-5

Residuos

agaggtggcc ccg gatgctg cggcgcccg tggccgggct ggctgcggcc gccctgggcc60

gggccccacc ggacgcctct ctttcaccc ccaggc96

3-95

Secuencias

3-95-1

Identificador de la secuencia

95

3-95-2

Tipo de molécula

RNA

3-95-3

Extensión

37

3-95-4-1

Características Localización/Calificadores

source 1..37

mol\_type = other RNA

note = null

note(en) = A24 mRNA sequence (IAH1 5'UTR)

organism = synthetic construct

3-95-5

Residuos

tggtggcgg cccgccccg cccgccccg ctgctcc37

3-96

Secuencias

|          |                                                                     |                                                                                                                                                                          |
|----------|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-96-1   | Identificador de la secuencia                                       | <b>96</b>                                                                                                                                                                |
| 3-96-2   | Tipo de molécula                                                    | <b>RNA</b>                                                                                                                                                               |
| 3-96-3   | Extensión                                                           | <b>59</b>                                                                                                                                                                |
| 3-96-4-1 | Características Localización/Calificadores                          | <b>source 1..59</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = A25 mRNA sequence (ABHD16A 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-96-5   | Residuos                                                            |                                                                                                                                                                          |
|          | ggagggcgagg gccggcaggg ggacctgctg ctggaagagc agcggcccga gccggggcc59 |                                                                                                                                                                          |

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### **3-97      Secuencias**

|          |                                                                      |                                                                                                                                                                            |
|----------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-97-1   | Identificador de la secuencia                                        | <b>97</b>                                                                                                                                                                  |
| 3-97-2   | Tipo de molécula                                                     | <b>RNA</b>                                                                                                                                                                 |
| 3-97-3   | Extensión                                                            | <b>132</b>                                                                                                                                                                 |
| 3-97-4-1 | Características Localización/Calificadores                           | <b>source 1..132</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = A26 mRNA sequence (SLC25A39 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-97-5   | Residuos                                                             |                                                                                                                                                                            |
|          | tttcggcgtc ggcctagggtg cgctgcgagc gcgcgcggac cgcgcacagg cggcggagcc60 |                                                                                                                                                                            |

ggtatgggcc cgcctgaccc tgggcgccgc gccgcacgag caccagccta gagccaggac120  
tgaagcttca ag132

**3-98      Secuencias**

|          |                                                           |                                                                                                                                                                        |
|----------|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-98-1   | Identificador de la secuencia                             | <b>98</b>                                                                                                                                                              |
| 3-98-2   | Tipo de molécula                                          | <b>RNA</b>                                                                                                                                                             |
| 3-98-3   | Extensión                                                 | <b>51</b>                                                                                                                                                              |
| 3-98-4-1 | Características Localización/Calificadores                | <b>source 1..51</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = A27 mRNA sequence (AUIF1 5'UTR)</b><br><b>organism = synthetic construct</b> |
| 3-98-5   | Residuos                                                  |                                                                                                                                                                        |
|          | cgagagactg ctgctgcgg cagagacgcc agaggtgcag ctccagcagc a51 |                                                                                                                                                                        |

**3-99      Secuencias**

|          |                                            |                                                                          |
|----------|--------------------------------------------|--------------------------------------------------------------------------|
| 3-99-1   | Identificador de la secuencia              | <b>99</b>                                                                |
| 3-99-2   | Tipo de molécula                           | <b>RNA</b>                                                               |
| 3-99-3   | Extensión                                  | <b>71</b>                                                                |
| 3-99-4-1 | Características Localización/Calificadores | <b>source 1..71</b><br><b>mol_type = other RNA</b><br><b>note = null</b> |

**organism = synthetic construct**

gctctgctgc c71

gggcgcggtc tcggcgggcg gcagccgctg cagacgagct gcgggctctg ctgcc55

48

3-101-4-1 Características Localización/Calificadores

**source 1..48**  
**mol\_type = other RNA**  
**note = null**  
**note(en) = A30 mRNA sequence (CCDC12 5'UTR)**  
**organism = synthetic construct**

3-101-5 Residuos

gcctgcgcga tgcaagacgg gagaaaagga ggggcgtacg cgggcaag48

**3-102      Secuencias**

3-102-1 Identificador de la secuencia

**102**

3-102-2 Tipo de molécula

**RNA**

3-102-3 Extensión

**132**

3-102-4-1 Características Localización/Calificadores

**source 1..132**  
**mol\_type = other RNA**  
**note = null**  
**note(en) = A31 mRNA sequence (MRPL14 5'UTR)**  
**organism = synthetic construct**

3-102-5 Residuos

atcgcgtccg ccgggctggg cctggcgcg c aggcgctagg aagaggccgc gtggggcgaa60  
ggcggcgctt ggctggtggg gcccgcggcg ggattttccc gggcggcgag agcggatcta120  
tcttgggatc cc132

### 3-103      Secuencias

3-103-1    Identificador de la secuencia

**103**

3-103-2    Tipo de molécula

**RNA**

3-103-3    Extensión

**27**

3-103-4-1 Características Localización/Calificadores

**source 1..27**

**mol\_type = other RNA**

**note = null**

**note(en) = A32 mRNA sequence (APOA1BP 5'UTR)**

**organism = synthetic construct**

3-103-5    Residuos

gccgggggcg cgcgctctgc gagctgg27

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### 3-104      Secuencias

3-104-1    Identificador de la secuencia

**104**

3-104-2    Tipo de molécula

**RNA**

3-104-3    Extensión

**43**

3-104-4-1 Características Localización/Calificadores

**source 1..43**

**mol\_type = other RNA**

**note = null**

**note(en) = A33 mRNA sequence (APOA1BP 5'UTR)**

**organism = synthetic construct**

3-104-5    Residuos

gccggggccg ggccgggccc ggggcgcgcg ctctgcgagc tgg43

**3-105    Secuencias**

|           |                                                       |                                                                                                                                                                 |
|-----------|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-105-1   | Identificador de la secuencia                         | <b>105</b>                                                                                                                                                      |
| 3-105-2   | Tipo de molécula                                      | <b>RNA</b>                                                                                                                                                      |
| 3-105-3   | Extensión                                             | <b>47</b>                                                                                                                                                       |
| 3-105-4-1 | Características Localización/Calificadores            | <b>source 1..47</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = Mod. 5'UTR mRNA sequence</b><br><b>organism = synthetic construct</b> |
| 3-105-5   | Residuos                                              |                                                                                                                                                                 |
|           | gggaaataag agagaaaaga agagtaagaa gaaatataag agccacc47 |                                                                                                                                                                 |

**3-106    Secuencias**

|           |                                            |                                                                                                                             |
|-----------|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| 3-106-1   | Identificador de la secuencia              | <b>106</b>                                                                                                                  |
| 3-106-2   | Tipo de molécula                           | <b>RNA</b>                                                                                                                  |
| 3-106-3   | Extensión                                  | <b>119</b>                                                                                                                  |
| 3-106-4-1 | Características Localización/Calificadores | <b>source 1..119</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = a-globin 3'UTR mRNA sequence</b> |

**organism = synthetic construct**

3-106-5 Residuos

tgataatagg ctggagcctc ggtggccatg cttctgccc ctggggcctc cccccagccc60

ctctcccct tctgcaccc gtacccccgt ggtctttgaa taaagtctga gtgggcggc119

### 3-107 Secuencias

3-107-1 Identificador de la secuencia

107

3-107-2 Tipo de molécula

## RNA

### 3-107-3 Extensión

52

### 3-107-4-1 Características Localización/Calificadores

**source 1..52**

**mol\_type = other RNA**

**note = null**

**note(en) = a-1 globin 5'UTR mRNA sequence**

**organism = synthetic construct**

3-107-5 Residuos

agacgaacta gtattcttct ggtccccaca gactcagaga gaacccqcca cc52

### 3-108 Secuencias

3-108-1 Identificador de la secuencia

108

3-108-2 Tipo de molécula

## RNA

### 3-108-3 Extensión

31

### 3-108-4-1 Características Localización/Calificadores

source 1..317

**organism = synthetic construct**

caaaacgctt agcctag317

3-109-5 Residuos

MWVTKLLPAL LLQHVLLHLL LLPIAIPYAE GQRKRRNTIH EFKKSAKTTL IKIDPALKIK60  
 TKKVNTADQC ANRCTRNKGL PFTCKAFVFD KARKQCLWFP FNSMSSGVKK EFGHEFDLYE120  
 NKDYIRNCII GKGRSYKGTV SITKSGIKCQ PWSSMIPHEH SFLPSSYRGK DLQENYCRNP180  
 RGEEGGPWCF TSNPEVRYEV CDIPQCSEVE CMTCNGESYR GLMDHTESGK ICQRWDHQT240  
 HRHKFLPERY PDKGFDDNYC RNPDGQPRPW CYTLDPHTRW EYCAIKTCAD NTMNDDVPL300  
 ETTECIQGQG EGYRGTVNTI WNGIPCQRWD SQYPHEHDMT PENFKCKDLR ENYCRNPDGS360  
 ESPWCFTTDP NIRVGYSQI PNCDMSHGQD CYRGNGKNYM GNLSQTRSGT TCSMWDKNME420  
 DLHRHIFWEP DASKLNENYC RNPDDDAHGP WCYTGNPLIP WDYCPISRCE GDTTPTIVNL480  
 DHPVISCAKT KQLRVVNGIP TRTNIGWMVS LRYRNKHICG GSLIKESWVL TARQCFPSRD540  
 LKDYEAWLGI HDVHGRGDEK CKQVLNVSQV VYGPEGSQDLV LMKLARPVAVL DDFVSTIDLP600  
 NYGCTIPEKT SCSVYGWGYT GLINYDGLLR VAHLYIMGNE KCSQHHRGKV TLNESEICAG660  
 AEKIGSGPCE GDYGGPLVCE QHKMRMVLGV IVPGRGCAIP NRPGIFVRVA YYAKWIHKII720  
 LTYKVPQS728

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### 3-110    **Secuencias**

|           |                                            |                                                                                                                                         |
|-----------|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 3-110-1   | Identificador de la secuencia              | <b>110</b>                                                                                                                              |
| 3-110-2   | Tipo de molécula                           | <b>DNA</b>                                                                                                                              |
| 3-110-3   | Extensión                                  | <b>2187</b>                                                                                                                             |
| 3-110-4-1 | Características Localización/Calificadores | <b>source 1..2187</b><br><br><b>mol_type = other DNA</b><br><br><b>note = null</b><br><br><b>note(en) = Nucleotide sequence of hHGF</b> |

organism = synthetic construct

3-110-5 Residuos

atgtgggtga ccaaactcct gccagccctg ctgctgcagc atgtcctcct gcattcctc60  
ctgctcccca tcgcatccc ctatgcagag ggacaaagga aaagaagaaa tacaattcat120  
gaattcaaaa aatcagcaaa gactacccta atcaaaatag atccagcact gaagataaaa180  
accaaaaaag tgaatactgc agaccaatgt gctaatagat gtactaggaa taaaggact240  
ccattcactt gcaaggcttt tgttttgat aaagcaagaa aacaatgcct ctggttcccc300  
ttcaatagca tgtcaagtgg agtgaaaaaa gaatttgccc atgaattga ccttatgaa360  
aacaagact acattagaaa ctgcatcatt ggtaaaggac gcagctacaa gggaacagta420  
tctatcacta agagtggcat caaatgtcag ccctggagtt ccatgatacc acacgaacac480  
agcttttgc cttcagagcta tcggggtaaa gacctacagg aaaactactg tcgaaatcct540  
cgaggggaag aagggggacc ctggtgttc acaagcaatc cagaggtacg ctacgaagtc600  
tgtgacattc ctcatgttc agaagttgaa tgcattgacct gcaatgggga gagttatcga660  
ggtctcatgg atcatacaga atcaggcaag attgtcagc gctgggatca tcagacacca720  
caccggcaca aattcttgcc tgaagatat cccgacaagg gctttgatga taattattgc780  
cgcaatcccg atggccagcc gagggcatgg tgctatactc ttgacctca caccgctgg840  
gagtactgtg caattaaaac atgcgctgac aatactatga atgacactga tgttcctttg900  
gaaacaactg aatgcatcca aggtcaagga gaaggctaca ggggcactgt caataccatt960  
tggaatggaa ttccatgtca gcgtgggat tctcagtatc ctacagagca tgacatgact1020  
cctgaaaatt tcaagtgcaa ggacctacga gaaaattact gccgaaatcc agatgggtct1080  
gaatcacctt ggtgttttac cactgatcca aacatccgag ttggctactg ctcccaaatt1140  
ccaaactgtg atatgtcaca tggacaagat tgttatcgtg ggaatggcaa aaattatatg1200

ggcaacttat cccaaacaag atctggacta acatgttcaa tgtgggacaa gaacatggaa1260  
gacttacatc gtcatatctt ctgggaacca gatgcaagta agctgaatga gaattactgc1320  
cgaaatccag atgatgatgc tcattggacc ttgtgtctaca cgggaaatcc actcattcct1380  
tgggattatt gccctatttc tcgtgtgaa ggtgatacca cacctacaat agtcaattta1440  
gaccatcccg taatatcttg tgccaaaacg aaacaattgc gagttgtaaa tgggattcca1500  
acacgaacaa acataggatg gatggtagt ttgagataca gaaataaaca tatctgcgga1560  
ggatcattga taaaggagag tgggttctt actgcacgac agtgtttccc ttctcgagac1620  
ttgaaagatt atgaagcttg gcttgaatt catgatgtcc acggaagagg agatgagaaa1680  
tgcaaacagg ttctaatgt tcccagctg gtatatggcc ctgaaggatc agatctggtt1740  
ttaatgaagc ttgccaggcc tgctgtcctg gatgattttg ttagtacgat tgattacct1800  
aattatggat gcacaattcc tgaaaagacc agttgcagtg ttatggctg gggctacact1860  
ggattgatca actatgatgg cctattacga gtggcacatc tctatataat gggaaatgag1920  
aatgcagcc agcatcatcg agggaaggtg actctgaatg agtctgaaat atgtgctggg1980  
gctgaaaaga ttggatcagg accatgtgag ggggattatg gtggccact tgtttgtgag2040  
caacataaaa tgagaatggt tcttggtgtc attgttcctg gtcgtggatg tgccattcca2100  
aatcgtcctg gtattttgt ccgagtagca tattatgcaa aatggataca caaaattatt2160  
ttaacatata aggtaccaca gtcataag2187

**3-111      Secuencias**

|         |                               |             |
|---------|-------------------------------|-------------|
| 3-111-1 | Identificador de la secuencia | <b>111</b>  |
| 3-111-2 | Tipo de molécula              | <b>DNA</b>  |
| 3-111-3 | Extensión                     | <b>2187</b> |

3-111-4-1 Características Localización/Calificadores

**source 1..2187**

**mol\_type = other DNA**

**note = null**

**note(en) = hHGF codon-optimized sequence 1 (hHGF-OS1)**

**organism = synthetic construct**

3-111-5 Residuos

atgtgggtga ccaaactgct ccccgctctg ctgctgcagc atgtgctgct ccacctgctg60  
ctgctgccaa tcgccaatccc ctacgtgaa ggacagcgga agcgcagaaa cacaattcac120  
gaattcaaga agtccgcaa aacaacactg atcaagatcg accctgccct gaaaatcaaa180  
accaagaagg tgaacactgc cgatcagtgc gccaacagat gcacaagaaa caaaggcctg240  
cccttcacat gcaaggcctt tgtgttcgac aaggccagaa agcagtgccct gtggttcct300  
ttcaacagca tgagctctgg cgtgaagaaa gagttcggcc acgaattcga cctgtacgag360  
aacaaggatt acatcagaaa ttgtatcatc ggcaagggca gaagctacaa aggcacagt420  
tccatcacca aaagcggcat taagtgtcag ccttgagca gcatgatccc tcacgagcac480  
agcttctgc ctgacttta cagaggcaag gacctgcagg agaattactg ccggaaccct540  
agaggcgagg aaggcgggcc ttggtgctt accagcaacc ctgagggtcg gtacgaggtg600  
tgtgacatcc ccagtgagc cgaagtggaa tgcacgacct gtaatggcga gagctacaga660  
ggcctcatgg accatacaga gagcggaag atttgtcaaa gatgggatca ccagacacct720  
cacagacaca aattcctgcc cgaaagatat cctgacaagg gcttcgacga caactactgc780  
agaaatcctg atggccaacc cagacctgg tgctacaccc tggatcctca taccagatg840  
gagtactgtg ccatcaagac ctgcgctgat aatacatga acgacaccga tgtgcctctg900  
gaacaaccg agtgcaccca gggacagggc gaaggctacc ggggcaccgt gaacaccatc960

tggaacggca tcccctgccga gagatgggac agccagtacc cccacgaaca cgatatgacc1020  
cctgagaact tcaagtgcaa ggacctgaga gaaaattact gcagaaaccc agacggaagc1080  
gagtctcctt ggtgttttac caccgacccc aacatccggg tgggttactg cagccaaatc1140  
cccaattgcg acatgagcca cggccaggac tgctaccggg gaaacggcaa aaactacatg1200  
ggcaatctga gccagacccg gagcggctg acctgctcca tgtgggataa gaacatggaa1260  
gatctgcacc ggcacatctt ctgggagcct gacgcttcta agctgaacga gaactactgt1320  
aggaacccag acgacgatgc ccacggtccc tgggtctaca ccggcaaccc gctgatccct1380  
tgggactatt gtcctatcag ccgctgcgag ggcgatacaa cacctacat cgtgaacctg1440  
gaccaccctg tgatctcttg cgccaagacc aagcagctga gagtggtgaa cggcatccca1500  
acacggacca acatcggatg gatggtctcc ctgagatacc ggaacaagca catctcgggc1560  
ggctctctga tcaaggaatc ttgggtcctg accgccagac agtgctccc cagccgggac1620  
ctgaaggact atgaggcctg gctgggaatc cagcagctgc acggcagagg cgacgagaag1680  
tgcaagcaag tgctgaacgt gtcccagctg gtgtacggcc ctgagggatc tgatctggtc1740  
ctgatgaaac tggccagacc cgccgtgctg gacgactttg tgtccacat cgacctgcct1800  
aactacggct gcaccatccc tgaaaagacc agctgcagcg tgtacggctg gggctataca1860  
ggcctgatca actacgacgg tctgctcgg gttgctcacc tgtacatcat gggcaacgag1920  
aagtgcagcc agcaccacag aggaaagggt acacttaacg agagcgagat ctgcgccggc1980  
gccgagaaaa tcggctccgg ccctgtgaa ggcgactacg gaggccctct ggtgtgcgaa2040  
cagcacaaga tgagaatggt gctgggcgtg atcgtgcccg gaagaggctg tgcaatccct2100  
aataggcccc gcattttcgt gcgggtggcc tactacgcca agtggatcca caagatcatc2160  
ctgacgtaca aggtgcctca gagctga2187

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### 3-112      Secuencias

|           |                                            |                                                                                                                                                  |
|-----------|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-112-1   | Identificador de la secuencia              | 112                                                                                                                                              |
| 3-112-2   | Tipo de molécula                           | DNA                                                                                                                                              |
| 3-112-3   | Extensión                                  | 2187                                                                                                                                             |
| 3-112-4-1 | Características Localización/Calificadores | source 1..2187<br>mol_type = other DNA<br>note = null<br>note(en) = hHGF codon-optimized sequence 2 (hHGF-OS2)<br>organism = synthetic construct |

### 3-112-5      Residuos

atgtgggtca ccaaactgct gcccgccctg ctgctgcagc acgtgctcct gcacctgctg60  
ctgctgccta tcgcatccc ttacgccgaa ggccagagaa agcggagaaa taccattcac120  
gaatttaaga agagcgccaa gaccacactg atcaagatcg accctgccct gaaaatcaag180  
accaagaaag tgaacacagc cgaccaatgc gctaatagat gcacaagaaa caaaggcctg240  
cctttcacct gcaaggcctt cgtgttcgat aaggccagaa agcagtcctt gtggttcccc300  
ttcaacagca tgagcagcgg cgtgaagaaa gaattcggtc acgagttcga cctgtacgag360  
aataaggact acattagaaa ctgcatcatc ggcaagggcc ggagctacaa gggcaccgtg420  
agcatcacca agtctggcat caagtgcag ccatggagtt ccatgatccc tcatgagcac480  
agcttctgc caagctctta ccggggaaag gatctgcagg agaactattg tagaaatccc540  
agaggcgagg aaggaggacc ctggtgttt accagcaacc cagaggtgcg gtacgagggtg600  
tgcgacatac ccagtgtagc cgaggtggaa tgcattgacat gcaacggcga gagtaccgg660  
ggcctgatgg accacacaga gagcggcaaa atctgcaaaa gatgggatca ccagaccct720

cataggcaca agttcctgcc cgagagatac cctgacaagg gcttcgacga caattactgc780  
cggaaccctg atggacagcc tagacctgg tgctacaccc tggaccctca caccagatgg840  
gaatactgcg ccatcaagac atgtgccgat aacaccatga acgacaccga tgtgccactc900  
gagacaactg agtgtatcca gggccagggc gagggctaca ggggcaccgt gaacaccatc960  
tggaacggca tcccttgtca gcggtgggac agccaatacc cccacgaaca tgatatgacc1020  
ccagaaaact tcaagtcaa agatctcggg gaaaactact gtagaaacc tgacggctcc1080  
gagagccctt ggtgcttcac caccgaccct aacatcaggg tgggctactg tagccagatc1140  
cccaactgcg acatgagcca cggtcaggac tgctacagag gaaacggcaa gaattacatg1200  
ggcaacctga gccagaccag aagcggcctg acctgcagca tgtgggacaa aaacatggaa1260  
gatctgcacc ggcacatctt ttgggagcct gacgccagca agctgaatga gaactactgt1320  
cggaaccctg acgacgatgc tcacggccct tggtgctaca caggcaaccc tctgatccct1380  
tgggactatt gtcctattag caggtgtgaa ggcgacacga cccctacaat cgtgaacctg1440  
gatcacccag tgatcagctg tgctaaaaca aagcaactga gagtggtgaa tggatcccg1500  
acccggacca acatcggatg gatggtcagc ctgcggtaca gaaacaagca catctgcggc1560  
ggtagcctga tcaaggaatc ctgggtgtg acagccagac agtgtttcc cagcagagat1620  
ctgaaggact acgaggcctg gctgggcac cagcagctgc acggcagagg cgacgagaag1680  
tgcaagcagg ttctgaacgt gtcccagctg gtgtacggcc ccgagggctc tgatctggtt1740  
ctgatgaagc ttgtagacc cgctgtgctg gatgacttcg tgtccaccat cgacctgcca1800  
aattacggat gtacaattcc tgaagagacc tctgttctg tgtacggctg gggctacacc1860  
ggactcatca actatgacgg cctgctgaga gtggcccacc tgtatatcat gggcaacgag1920  
aagtgcagcc agcaccatag aggcaagggtg accctgaacg agtctgaaat ctgcgccgga1980  
gccgagaaaa tcgcatctgg cccctgcgaa ggagattacg gcggccctct ggtctgcgag2040

cagcacaaga tgagaatggt gctgggctg atcgtgcccgc gcagaggctg cgccatccct2100  
aaccggcctg gaatcttctg gcgcgtggcc tattacgccca aatggatcca caaaatcatc2160  
ctgacataca aggtcccaca gtcttga2187

**3-113      Secuencias**

|           |                                            |                                                                                                                                                                                     |
|-----------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-113-1   | Identificador de la secuencia              | <b>113</b>                                                                                                                                                                          |
| 3-113-2   | Tipo de molécula                           | <b>DNA</b>                                                                                                                                                                          |
| 3-113-3   | Extensión                                  | <b>2187</b>                                                                                                                                                                         |
| 3-113-4-1 | Características Localización/Calificadores | <b>source 1..2187</b><br><b>mol_type = other DNA</b><br><b>note = null</b><br><b>note(en) = hHGF codon-optimized sequence 3 (hHGF-OS3)</b><br><b>organism = synthetic construct</b> |

**3-113-5      Residuos**

atgtgggtga ccaagctgct gcccgccctg ctctgcagc acgtgctgct gcacctgctc60  
ctgctgcccc tcgcatccc ctacgccgag gggcagagaa agagaagaaa caccatccac120  
gagttcaaga agagcgccaa gaccaccctg atcaagatcg accccgccct gaagatcaag180  
accaagaagg tgaacaccgc cgatcagtc gccaacagat gcacaagaaa caagggcctg240  
cccttcacct gcaaggcctt cgtgttcgac aaggctagaa agcagtcct gtggttcccc300  
ttcaacagca tgagcagcgg cgtgaagaag gagttcggcc acgagtcga cctgtacgag360  
aacaaggact acatcagaaa ctgcatcatc ggcaagggca gaagctacaa gggcaccgtg420  
agcatcacca agagcggcat caagtgtcag ccctggagca gcatgatccc ccatgagcac480

agcttctgc ctagcagcta cagaggaag gacctgaag agaactactg cagaaaccct540  
agaggcgagg agggcgccc ttgtgttc acaagcaatc ccgaggtag atacgaggtag600  
tgcgacatcc ctcatgag cgaggtag tgcagacct gcaacggcga aagctataga660  
ggcctgatgg accacaccga gagcggaag attgtcagc ggtgggatca ccaaaccct720  
cacagacaca agttcctgcc cgagagatac cccgacaagg gcttcgacga caattactgt780  
agaaaccctg acgggcagcc tagaccctgg tttacaccc tggaccccca cacaagatgg840  
gagtactcgc ccatcaagac ctgcgccgac aacaccatga acgacaccga cgtgccctg900  
gagaccaccg agtgcaccca aggccaaggc gagggctaca gaggcaccgt gaacaccatc960  
tggaacggca ttccctgtca gagatgggac agccaatacc cccatgaaca cgatatgacc1020  
cccgagaact tcaagtgaag ggacctgaga gagaactact gccggaacc cgtggcagc1080  
gaatccctt ggtgctcac caccgacccc aacatcagag tgggctactg cagccaaatc1140  
cccaactgag acatgagcca cggccaagac tttacagag ggaacggcaa gaactacatg1200  
ggcaacctga gccaacaag aagcggcctg acctgcagca tgtgggacaa gaacatggag1260  
gacctgcaca gacacatctt ctgggagccc gacgtagca agctgaacga gaactactgt1320  
cggaaccctg acgacgatgc ccacggcccc tgggtctaca ccggcaacc cctgatcccc1380  
tgggactact gccccatcag cagatgcgag ggcgacacca ccccaccat cgtgaacctg1440  
gaccaccccg tgatcagctg tgccaagacc aagcaactga gagtggtaga cggcatcccc1500  
acaagaacca acattggctg gatggtagc ctgagataca gaaacaagca catctgcggc1560  
ggcagcctga tcaaggagag ctgggtgctg accgtagac agtgcttccc tagcagagac1620  
ctgaaggact acgaggcctg gctgggcatc cagcagctgc acggcagagg cgacgagaag1680  
tgtaacaag tgctgaacgt gagccaactg gtgtacggcc ccgaggcag cgacctggtg1740  
ctgatgaagc tggctagacc cgccgtgctg gacgactcg tgagcaccat cgacctgccc1800

aactacggct gcaccatccc cgagaagaca agctgcagcg tgtacggctg gggctacacc1860  
ggcctgatca actacgacgg cctgctgaga gtggcccacc tgtacatcat gggcaacgag1920  
aagtgcagcc aacaccaccg gggcaaagtg accctgaacg agagcgagat ctgcgccggg1980  
gctgagaaaa tcggcagcgg ccctgcgag ggggactacg ggggcccct ggtgtgcgag2040  
cagcacaaga tgagaatggt gctgggcgtg atcgtgcccg gcagaggctg cgccatcccc2100  
aacagaccg gcattctcgt gagagtggcc tactacgcca agtgatcca caagatcatc2160  
ctgacctaca aggtgcctca gagctga2187

**3-114    Secuencias**

|           |                                            |                                                                                                                                                                                                             |
|-----------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-114-1   | Identificador de la secuencia              | <b>114</b>                                                                                                                                                                                                  |
| 3-114-2   | Tipo de molécula                           | <b>DNA</b>                                                                                                                                                                                                  |
| 3-114-3   | Extensión                                  | <b>2512</b>                                                                                                                                                                                                 |
| 3-114-4-1 | Características Localización/Calificadores | <b>source 1..2512</b><br><b>mol_type = other DNA</b><br><b>note = null</b><br><b>note(en) = 5'UTR-hHGF-<math>\alpha</math> globin 3'UTR-A30L70 (Mod.-hHGF-OS2)</b><br><b>organism = synthetic construct</b> |

**3-114-5    Residuos**

gggaaataag agagaaaaga agagtaagaa gaaatataag agccaccgct agccttaagg60  
ccaccatgtg ggtcacaaaa ctgctgcccg ccctgctgct gcagcacgtg ctctgcacc120  
tgctgctgct gcctatgcc atcccttacg ccgaaggcca gagaaagcgg agaaatacca180  
ttcacgaatt taagaagagc gccaaagacca cactgatcaa gatcgaccct gccctgaaaa240

tcaagaccaa gaaagtgaac acagccgacc aatgcgctaa tagatgcaca agaaacaaag300  
gcctgccttt cacctgcaag gccttcgtgt tcgataaggc cagaaagcag tgcctgtggt360  
tccccctcaa cagcatgagc agcggcgtga agaaagaatt cggtcacgag ttcgacctgt420  
acgagaataa ggactacatt agaaactgca tcatcgga gggccggagc tacaagggca480  
ccgtgagcat caccaagtct ggcatcaagt gccagccatg gagttccatg atccctcatg540  
agcacagctt cctgccaagc tcttaccggg gaaaggatct gcaggagaac tattgtagaa600  
atcccagagg cgaggaagga ggaccctggt gttttaccag caaccagag gtgcggtacg660  
agggtgcgca cataccccag tgcagcgagg tggaatgcat gacatgcaac ggcgagagct720  
accggggcct gatggaccac acagagagcg gcaaaatctg ccaaagatgg gatcaccaga780  
cccctcatag gcacaagttc ctgcccgaga gataccctga caagggcttc gacgacaatt840  
actgccggaa ccctgatgga cagcctagac ctggtgcta caccctggac cctcacacca900  
gatgggaata ctgcgccatc aagacatgtg ccgataacac catgaacgac accgatgtgc960  
cactcgagac aactgagtgt atccagggcc agggcgaggg ctacaggggc accgtgaaca1020  
ccatctggaa cggcatccct tgtcagcggg gggacagcca atacccccac gaacatgata1080  
tgaccccaga aaactcaag tgcaaagatc tgcgggaaaa ctactgtaga aaccctgacg1140  
gctccgagag cccttggtgc ttcaccaccg accctaacat caggggtggc tactgtagcc1200  
agatcccaa ctgcgacatg agccacggtc aggactgcta cagaggaaac ggcaagaatt1260  
acatgggcaa cctgagccag accagaagcg gcctgacctg cagcatgtgg gacaaaaaca1320  
tggaagatct gcaccggcac atctttggg agcctgacgc cagcaagctg aatgagaact1380  
actgtcgga ccctgacgac gatgctcacg gcccttggtg ctacacaggc aaccctctga1440  
tcccttgga ctattgtct attagcaggt gtgaaggcga cagaccct acaatcgta1500  
acctggatca cccagtgatc agctgtgcta aaacaaagca actgagagt gtgaatgta1560

tcccgaccg gaccaacatc ggatggatgg tcagcctgcg gtacagaaac aagcacatct1620  
gcggcggtag cctgatcaag gaatcctggg tgtgacagc cagacagtgt ttcccagca1680  
gagatctgaa ggactacgag gcctggctgg gcatccacga cgtgcacggc agaggcgacg1740  
agaagtgcaa gcaggttctg aacgtgtccc agctggtgta cggccccgag ggctctgatc1800  
tggttctgat gaagcttct agaccgctg tgctggatga ctctgtgcc accatcgacc1860  
tgccaaatta cggatgtaca attcctgaaa agacctctg ttctgtgtac ggctggggct1920  
acaccggact catcaactat gacggcctgc tgagagtggc ccacctgtat atcatgggca1980  
acgagaagtg cagccagcac catagaggca aggtgaccct gaacgagtct gaaatctgcg2040  
ccggagccga gaaaatcggg tctggcccct gcgaaggaga ttacggcggc cctctggtct2100  
gcgagcagca caagatgaga atggtgctgg gcgtgatcgt gcccggcaga ggctgcgcca2160  
tccctaaccg gcctggaatc ttcgtgcgcg tggcctatta cgccaaatgg atccacaaaa2220  
tcacctgac atacaaggtc ccacagtctt gataataggc tggagcctcg gtggccatgc2280  
ttctgcccc ttgggcctcc cccagcccc tctccccct cctgcaccg taccctccgtg2340  
gtctttgaat aaagtctgag tgggcggcct cgagccgcgg aaaaaaaaaa aaaaaaaaaa2400  
aaaaaaaaa gcatatgact aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa2460  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa gtttaacat ttaaattcta ga2512

**3-115    Secuencias**

|           |                                            |                       |
|-----------|--------------------------------------------|-----------------------|
| 3-115-1   | Identificador de la secuencia              | <b>115</b>            |
| 3-115-2   | Tipo de molécula                           | <b>DNA</b>            |
| 3-115-3   | Extensión                                  | <b>2638</b>           |
| 3-115-4-1 | Características Localización/Calificadores | <b>source 1..2638</b> |

**mol\_type = other DNA**

**note = null**

**note(en) = ACTG1 5'UTR-hHGF-CTSB 3'UTR-A30L70 (A1B12-hHGF-OS2)**

**organism = synthetic construct**

3-115-5    Residuos

ctctgcact ctgttctcc gccgctccgc cgtcgcgtt ctctgccggt cgcagctagc60  
gccaccatgt gggtcaccaa actgtgccc gccctgtctg tgcagcacgt gctcctgcac120  
ctgctgtctg tgcctatgc catcccttac gccgaaggcc agagaaagcg gaaaaatacc180  
attcacgaat ttaagaagag cgccaagacc aactgatca agatcgaccc tgcctgaaa240  
atcaagacca agaaagtga cacagccgac caatgcgcta atagatgcac aaaaaacaaa300  
ggcctgcctt tcacctgcaa ggccttcgtg ttcgataagg ccagaaagca gtgcctgtgg360  
ttccccttca acagcatgag cagcggcgtg aagaaagaat tcggtcacga gttcgacctg420  
tacgagaata aggactacat tagaaactgc atcatcgga agggccggag ctacaagggc480  
accgtgagca tcaccaagtc tggcatcaag tgccagccat ggagttccat gatccctcat540  
gagcacagct tcctgccaag ctctaccgg ggaaaggatc tgcaggagaa ctattgtaga600  
aatcccagag gcgaggaagg aggacctgg tgtttacca gcaaccaga ggtgcggtac660  
gagggtgtcg acatacccca gtgcagcgag gtggaatgca tgacatgcaa cggcgagagc720  
taccggggcc tgatggacca cacagagagc ggcaaaatct gccaaagatg ggatcaccag780  
acccctcata ggcacaagtt cctgccgag agataccctg acaagggtt cgacgacaat840  
tactgccgga accctgatgg acagcctaga cttggtgt acaccctga ccctcacacc900  
agatgggaat actgcgcat caagacatgt gccgataaca ccatgaacga caccgatgtg960  
ccactcgaga caactgagt tatccagggc cagggcgagg gctacagggg caccgtgaac1020

accatctgga acggcatccc ttgtcagcgg tgggacagcc aatacccca cgaacatgat1080  
atgacccag aaaacttcaa gtgcaaagat ctgcgggaaa actactgtag aaaccctgac1140  
ggctccgaga gcccttggg cttcaccacc gaccctaaca tcagggtggg ctactgtagc1200  
cagatcccca actgcgacat gagccacggt caggactgct acagaggaaa cggaagaat1260  
tacatgggca acctgagcca gaccagaagc ggcctgacct gcagcatgtg ggacaaaaac1320  
atggaagatc tgcaccggca catcttttg gagcctgacg ccagcaagct gaatgagaac1380  
tactgtcgga acctgacga cgtgctcac gcccttggg gctacacagg caaccctctg1440  
atccctggg actattgtcc tattagcagg tgtgaaggcg acacgacccc tacaatcgtg1500  
aacctggatc acccagtgat cagctgtgct aaaacaaagc aactgagagt ggtgaatggt1560  
atcccgaccc ggaccaacat cggtatgatg gtcagcctgc ggtacagaaa caagcacatc1620  
tgcggggta gcctgatcaa ggaatcctgg gtgttgacag ccagacagtg tttcccagc1680  
agagatctga aggactacga ggctggctg ggcattcacg acgtgcacgg cagaggcgac1740  
gagaagtga agcaggttct gaacgtgtcc cagctggtgt acggccccga gggctctgat1800  
ctggttctga tgaagctgc tagaccgct gtgctggatg acttcgtgc caccatcgac1860  
ctgccaaatt acggatgtac aattcctgaa aagacctct gttctgtga cggctggggc1920  
tacaccggac tcatcaacta tgacggcctg ctgagagtgg cccacctgta tatcatgggc1980  
aacgagaagt gcagccagca ccatagaggc aaggtagacc tgaacgagtc tgaatctgc2040  
gccggagccg agaaaatcgg atctggcccc tgcgaaggag attacggcg ccctctggtc2100  
tgcgagcagc acaagatgag aatggtgctg ggcgtgatc tgccggcag aggctgcgcc2160  
atccctaacc ggcctggaat ctctgtgcgc gtggcctatt acgcaaatg gatccacaaa2220  
atcatcctga catacaaggt cccacagtct tgataagggc ccaccggtc tgccgtgggc2280  
ctgtcgtgcc agtctgggg gcgagatcg gagaatcacg tcctggaact gcatgttct2340

gcgactcttg ggacttcac ttaactctc gctgcccag ccatgtttc aaccatggca2400  
tccctcccc aattagtcc ctgtaccc ctgtcaacct ctctgtaagt gcctggtaag2460  
cttgcccttg ctaagaact caaacatag ctgtgctcta ccgcgaaaa aaaaaaaaaa2520  
aaaaaaaaa aaaaaagcat atgactaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa2580  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaagttt aaacatttaa attctaga2638

**3-116    Secuencias**

|           |                                            |                                                                                                                                                                                                 |
|-----------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-116-1   | Identificador de la secuencia              | <b>116</b>                                                                                                                                                                                      |
| 3-116-2   | Tipo de molécula                           | <b>DNA</b>                                                                                                                                                                                      |
| 3-116-3   | Extensión                                  | <b>2652</b>                                                                                                                                                                                     |
| 3-116-4-1 | Características Localización/Calificadores | <b>source 1..2652</b><br><b>mol_type = other DNA</b><br><b>note = null</b><br><b>note(en) = CHCHD10 5'UTR-hHGF-CTSB 3'UTR-A30L70 (A15B12-hHGF-OS2)</b><br><b>organism = synthetic construct</b> |

**3-116-5    Residuos**

ggcatttgc cccgcgacag caccgctgcc gccgtctcta aggtcgcccg ggtcccaccg60  
ccgccaccgc tagcgccacc atgtgggtca ccaaactgct gcccgccctg ctgctgcagc120  
acgtgctcct gcacctgctg ctgctgccta tcgccatccc ttacgccgaa ggccagagaa180  
agcggagaaa taccattcac gaatttaaga agagcgccaa gaccacactg atcaagatcg240  
accctgccct gaaaatcaag accaagaaag tgaacacagc cgaccaatgc gctaatagat300  
gcacaagaaa caaaggcctg cctttcacct gcaaggcctt cgtgttcgat aaggccagaa360

agcagtgctt gtggttcccc ttcaacagca ttagcagcgg cgtgaagaaa gaattcggtc420  
acgagttcga cctgtacgag aataaggact acattagaaa ctgcatcatc ggcaagggcc480  
ggagctacaa gggcaccgtg agcatcacca agtctggcat caagtgccag ccatggagtt540  
ccatgatccc tcatgagcac agcttctgac caagctctta ccgggggaaag gatctgcagg600  
agaactattg tagaaatccc agaggcgagg aaggaggacc ctggtgtttt accagcaacc660  
cagaggtgag gtacgaggtg tgcgacatac ccagtgagc cgaggtggaa tgcagacat720  
gcaacggcga gagctaccgg ggcctgatgg accacacaga gagcgccaaa atctgcaaaa780  
gatgggatca ccagaccctt cataggcaca agttcctgcc cgagagatac cctgacaagg840  
gcttcgacga caattactgc cggaaccctg atggacagcc tagacctgg tgctacacc900  
tggaccctca caccagatgg gaatactgag ccatcaagac atgtgccgat aacaccatga960  
acgacaccga tgtgccactc gagacaactg agtgtatcca gggccagggc gagggctaca1020  
ggggcaccgt gaacaccatc tggaacggca tcccttgta gcggtgggac agccaatacc1080  
cccacgaaca tgatagacc ccagaaaact tcaagtcaa agatctgagg gaaaactact1140  
gtagaaacc tgacggctcc gagagccctt ggtgcttcac caccgaccct aacatcaggg1200  
tggtgctact tagccagatc ccaactgag acatgagcca cggtcaggac tgctacagag1260  
gaaacggcaa gaattacatg ggcaacctga gccagaccag aagcggcctg acctgcagca1320  
tgtgggacaa aaacatggaa gatctgcacc ggcacatctt ttgggagcct gacgccagca1380  
agctgaatga gaactactgt cggaaccctg acgacgatgc tcacggccct tgggtgctaca1440  
caggcaacc tctgatccct tgggactatt gtcctattag caggtgtgaa ggcgacacga1500  
cccctacaat cgtgaacctg gatcacccag tgatcagctg tgctaaaaca aagcaactga1560  
gagtggtgaa tggatcccg acccggaaca acatcgatg gatggtcagc ctgcggtaca1620  
gaaacaagca catctcgagg ggtagcctga tcaaggaatc ctgggtgttg acagccagac1680

agtgttttcc cagcagagat ctgaaggact acgaggcctg gctgggcatc cacgacgtgc1740  
acggcagagg cgacgagaag tgcaagcagg ttctgaacgt gtcccagctg gtgtacggcc1800  
ccgagggctc tgatctggtt ctgatgaagc ttgctagacc cgctgtgctg gatgacttcg1860  
tgtccaccat cgacctgcc aattacggat gtacaattcc tgaaaagacc tcctgttctg1920  
tgtacggctg gggctacacc ggactcatca actatgacgg cctgctgaga gtggcccacc1980  
tgtatatcat gggcaacgag aagtgcagcc agcaccatag aggcaagggtg accctgaacg2040  
agtctgaaat ctgcgccgga gccgagaaaa tcggatctgg cccctgcgaa ggagattacg2100  
gcggccctct ggtctgcgag cagcacaaga tgagaatggt gctgggctg atcgtgcccg2160  
gcagaggctg cgccatccct aaccggcctg gaattctgt gcgctggcc tattacgcca2220  
aatggatcca caaaatcatc ctgacataca aggtcccaca gtcttgataa gggcccaccg2280  
gttctgccgt gggcctgtcg tgccagtcct gggggcgaga tcgggagaat cacgtcctgg2340  
aactgcatgt tcttgcgact ctggggactt catcttaact tctcgtgcc ccagccatgt2400  
tttaacctt ggcaccctc cccaattag ttccctgtca tcctcgtcaa ccttctctgt2460  
aagtgcctgg taagcttggc ctgcttaag aactcaaac atagctgtgc tctaccgctg2520  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa gcatatgact aaaaaaaaaa aaaaaaaaaa2580  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa gtttaacat2640  
ttaaattcta ga2652

**3-117      Secuencias**

|         |                               |            |
|---------|-------------------------------|------------|
| 3-117-1 | Identificador de la secuencia | <b>117</b> |
| 3-117-2 | Tipo de molécula              | <b>AA</b>  |
| 3-117-3 | Extensión                     | <b>462</b> |

3-117-4-1 Características Localización/Calificadores

**source 1..462**

**mol\_type = protein**

**note = null**

**note(en) = PD-1 antibody heavy chain amino acid sequence**

**organism = Homo sapiens**

3-117-5 Residuos

MEWSWVFLFF LSVTTGVHSE VQLVESGGGL VQPGGSLRLS CAASGFTFSS YMMSWVRQAP60  
GKGLEWVATI SGGGANTYYP DSVKGRFTIS RDNAKNSLYL QMNSLRAEDT AVYYCARQLY120  
YFDYWGQGTT VTVSSASTKG PSVFPLAPCS RSTSESTAAL GCLVKDYFPE PVTVSWNSGA180  
LTSGVHTFPA VLQSSGLYSL SSVVTPSSS LGTKYTCNV DHKPSNTKVD KRVESKYGPP240  
CPPCPAPEFL GGPSVFLFPP KPKDTLMISR TPEVTCVVVD VSQEDPEVQF NWYVDGVEVH300  
NAKTKPREEQ FNSTYRVVSV LTVLHQDWLN GKEYKCKVSN KGLPSSIEKT ISKAKGQPRE360  
PQVYTLPPSQ EEMTKNQVSL TCLVKGFPYS DIAVEWESNG QPENNYKTTT PVLDSGGSFF420  
LYSRLTVDKS RWQEGNVFSC SVMHEALHNN YTQKSLSLSL GK462

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**3-118      Secuencias**

3-118-1 Identificador de la secuencia

**118**

3-118-2 Tipo de molécula

**AA**

3-118-3 Extensión

**234**

3-118-4-1 Características Localización/Calificadores

**source 1..234**

**mol\_type = protein**

**note = null**

organism = Homo sapiens

MSVPTQVLGL LLLWLT DARC DIQMTQSPSS LSASVGDRTV ITCLASQTIG TWL TWYQQKP60  
GKAPKLLIYT ATSLADGVPS RFGSGSGTD FTLTSSLQP EDFATYYCQQ VYSIPWTFGG120  
GTKVEIKRTV AAPSVFIFPP SDEQLKSGTA SVVCLNNFY PREAKVQWKV DNALQSGNSQ180  
ESVTEQDSKD STYLSSTLT LSKADYEKHK VYACEVTHQG LSSPVTKSFN RGEC234

## 119

## DNA

1386

**source 1..1386**

**mol\_type = other DNA**

```
note = null
```

**note(en) = PD-1 antibody heavy chain DNA sequence**

**organism = synthetic construct**

atggaatggt cctgggtgtt cctgttcttc ctgtccgtga ccaccggcgt gactccgaa60  
gtgcagctgg tggaatctgg cggcggactg gtgcagcctg gcggatctct gagactgtct120  
tgtgccgcct ccggcttcac ctctccagc tacatgatga gctgggtgcg acaggccct180  
ggcaagggaac tggaatgggt ggccacaatc tctggcggag gcgccaacac ctactacccc240

gactctgtga agggccggtt caccatctct cgggacaacg ccaagaactc cctgtacctg300  
cagatgaaca gcctgcgggc cgaggacacc gccgtgtact actgtgcccg gcagctgtac360  
tacttcgact actggggcca gggcaccacc gtgaccgtgt cctctgcttc taccaagggc420  
ccctccgtgt tccctctggc tccttgctcc agatccacct ccgagtcac cgctgctctg480  
ggctgcctcg tgaaggacta cttccccgag cctgtgacag tgtcctggaa ctctggcgcc540  
ctgacctctg gcgtgcacac cttccagca gtgctgcagt cctccggcct gtactccctg600  
tcctccgtcg tgacagtgcc ctccagctct ctgggcacca agacctacac ctgtaacgtg660  
gaccacaagc cctccaacac caaggtggac aagagagtgg aatctaagta cggccctccc720  
tgccccctt gtctgcccc tgaatttctg ggcggaccct ctgtgtttt gttccccca780  
aagcccaagg acacctgat gatctccgg accccgaag tgacctgcgt ggtggtggat840  
gtgtcccagg aagatccga ggtgcagttc aattggtacg tggacggcgt ggaagtgcac900  
aatgccaaga ccaagcctag agaggaacag ttcaactcca cctaccgggt ggtgtccgtg960  
ctgaccgtgc tgcacagga ctggctgaac ggcaaagagt acaagtcaa ggtgtccaac1020  
aagggcctgc ccagctccat cgaaaagacc atctccaagg ccaagggcca gccccgggaa1080  
ccccaggtgt acacactgcc tccaagccag gaagagatga ccaagaacca ggtgtccctg1140  
acctgcctcg tgaaaggctt ctaccctcc gatatcgccg tggaatggga gtccaacggc1200  
cagcctgaga acaactacaa gaccacccc cctgtgctgg actccgacgg ctcttctt1260  
ctgtactctc gcctgaccgt ggacaagtcc cgggtgcagg aaggcaacgt gttctcctgc1320  
agcgtgatgc acgaggccct gcacaaccac tacaccaga agtcctgtc cctgtctctg1380  
ggaaag1386

|           |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-120-1   | Identificador de la secuencia              | 120                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3-120-2   | Tipo de molécula                           | DNA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3-120-3   | Extensión                                  | 702                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3-120-4-1 | Características Localización/Calificadores | <p>source 1..702</p> <p>mol_type = other DNA</p> <p>note = null</p> <p>note(en) = PD-1 antibody light chain DNA sequence</p> <p>organism = synthetic construct</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 3-120-5   | Residuos                                   | <p>atgtccgtgc ctacccaggt gctgggactg ctgctgctgt ggctgaccga cgccagatgc60</p> <p>gacatccaga tgaccagtc cccctccagc ctgtctgcct ctgtgggcga cagagtgacc120</p> <p>atcacctgtc tggcctcca gaccatcggc acctggctga cctggtatca gcagaagcct180</p> <p>ggcaaggccc ccaagctgct gatctacacc gccaccagtc tggccgatgg cgtgccctct240</p> <p>agattctccg gctctggctc tggcaccgac ttaccctga ccatcagtc cctgcagccc300</p> <p>gaggacttcg ccactacta ctgccagcag gtgtactcca tcccctggac cttggcgga360</p> <p>ggcaccaagg tggaaatcaa gcggaccgtg gccgtccct ccgtgttcac cttccacact420</p> <p>tccgacgagc agctgaagtc cggaaccgcc agtgtcgtgt gcctgctgaa caacttctac480</p> <p>ccccgcgagg ccaaggtgca gtggaagggt gacaacgccc tgcagtccgg caactcccag540</p> <p>gaatccgtga ccgagcagga ctccaaggac agcacctact cctgtcctc caccctgacc600</p> <p>ctgtccaagg ccgactacga gaagcacaag gtgtacgcct gcgaagtgac ccaccagggc660</p> <p>ctgtctagcc ccgtgaccaa gtctttcaac cggggcgagt gc702</p> |

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### 3-121    Secuencias

|           |                                            |                                                                                                                                                                                  |
|-----------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-121-1   | Identificador de la secuencia              | <b>121</b>                                                                                                                                                                       |
| 3-121-2   | Tipo de molécula                           | <b>RNA</b>                                                                                                                                                                       |
| 3-121-3   | Extensión                                  | <b>1386</b>                                                                                                                                                                      |
| 3-121-4-1 | Características Localización/Calificadores | <b>source 1..1386</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = PD-1 antibody heavy chain mRNA sequence</b><br><b>organism = synthetic construct</b> |

### 3-121-5    Residuos

atggaatggt cctgggtgtt cctgttcttc ctgtccgtga ccaccggcgt gcactccgaa60  
gtgcagctgg tggaatctgg cggcggactg gtgcagcctg gcggatctct gagactgtct120  
tgtgccgcct ccggcttcac ctctccagc tacatgatga gctgggtgcg acaggcccct180  
ggcaagggac tggaatgggt ggccacaatc tctggcggag gcgccaacac ctactacccc240  
gactctgtga agggccggtt caccatctct cgggacaacg ccaagaactc cctgtacctg300  
cagatgaaca gcctgcgggc cgaggacacc gccgtgtact actgtgcccg gcagctgtac360  
tacttcgact actggggcca gggcaccacc gtgaccgtgt cctctgcttc taccaagggc420  
ccctccgtgt tccctctggc tccttgctcc agatccacct ccgagtcac cgctgctctg480  
ggctgcctcg tgaaggacta ctccccgag cctgtgacag tgtcctggaa ctctggcgcc540  
ctgacctctg gcgtgcacac cttccagca gtgctgcagt cctccggcct gtactccctg600  
tcctccgtcg tgacagtgcc ctccagctct ctgggcacca agacctacac ctgtaacgtg660  
gaccacaagc cctccaacac caaggtggac aagagagtgg aatctaagta cggccctccc720

tgccccctt gtctgcccc tgaattctg ggcggaccct ctgtgtttct gttccccca780  
aagcccaagg acaccctgat gatctcccg accccgaag tgacctgcgt ggtggtggat840  
gtgtcccagg aagatcccga ggtgcagttc aattggtacg tggacggcgt ggaagtgcac900  
aatgccaaga ccaagcctag agaggaacag ttcaactcca cctaccgggt ggtgtccgtg960  
ctgaccgtgc tgcatcagga ctggctgaac ggcaaagagt acaagtcaa ggtgtccaac1020  
aagggcctgc ccagctccat cgaaaagacc atctccaagg ccaagggcca gccccgggaa1080  
ccccaggtgt acacactgcc tccaagccag gaagagatga ccaagaacca ggtgtccctg1140  
acctgcctcg tgaaaggctt ctaccctcc gatatcgccg tggaatggga gtccaacggc1200  
cagcctgaga acaactaaa gaccacccc cctgtgctgg actccgacgg ctcttcttt1260  
ctgtactctc gcctgaccgt ggacaagtc cgggtggcagg aaggcaacgt gttctcctgc1320  
agcgtgatgc acgaggccct gcacaaccac tacaccaga agtccctgtc cctgtctctg1380  
ggaaag1386

|           |                                            |                                                                                                                                              |
|-----------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| 3-122     | Secuencias                                 |                                                                                                                                              |
| 3-122-1   | Identificador de la secuencia              | 122                                                                                                                                          |
| 3-122-2   | Tipo de molécula                           | RNA                                                                                                                                          |
| 3-122-3   | Extensión                                  | 702                                                                                                                                          |
| 3-122-4-1 | Características Localización/Calificadores | source 1..702<br>mol_type = other RNA<br>note = null<br>note(en) = PD-1 antibody light chain mRNA sequence<br>organism = synthetic construct |

3-122-5 Residuos

atgtccgtgc ctaccagggt gctgggactg ctgtgctgt ggctgaccga cgccagatgc60  
gacatccaga tgaccagtc cccctccagc ctgtctgcct ctgtgggcga cagagtgacc120  
atcacctgtc tggcctccca gaccatcggc acctggctga cctggatatca gcagaagcct180  
ggcaaggccc ccaagctgct gatctacacc gccaccagtc tggccgatgg cgtgccctct240  
agattctccg gctctggctc tggcaccgac ttaccctga ccatcagtc cctgcagccc300  
gaggactcg ccactacta ctgccagcag gtgtactcca tcccctggac cttggcgga360  
ggcaccaagg tggaaatcaa gcggaccgtg gccgctccct ccgtgtcat ctcccacct420  
tccgacgagc agctgaagtc cggaaccgcc agtgtcgtgt gcctgctgaa caacttctac480  
ccccgcgagg ccaaggtgca gtggaagggt gacaacgccc tgcagtccgg caactcccag540  
gaatccgtga ccgagcagga ctccaaggac agcacctact ccctgtcctc caccctgacc600  
ctgtccaagg ccgactacga gaagcacaag gtgtacgcct gcgaagtgac ccaccagggc660  
ctgtctagcc ccgtgaccaa gtcttcaac cggggcgagt gc702

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**3-123    Secuencias**

|           |                                            |                                                                                                                                                        |
|-----------|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-123-1   | Identificador de la secuencia              | <b>123</b>                                                                                                                                             |
| 3-123-2   | Tipo de molécula                           | <b>DNA</b>                                                                                                                                             |
| 3-123-3   | Extensión                                  | <b>2478</b>                                                                                                                                            |
| 3-123-4-1 | Características Localización/Calificadores | <b>source 1..2478</b><br><b>mol_type = other DNA</b><br><b>note = null</b><br><b>note(en) = 5'UTR-anti PD-1-a globin 3'UTR-A30L70 (Mod.-anti PD-1)</b> |

organism = synthetic construct

3-123-5 Residuos

gggaaataag agagaaaaga agagtaagaa gaaatataag agccaccatg gaatggtcct60  
gggtgttcct gttcttcctg tccgtgacca ccggcgtgca ctccgaagtg cagctggtgg120  
aatctggcgg cggactgggt cagcctggcg gatctctgag actgtcttgt gccgcctccg180  
gcttcacctt ctccagctac atgatgagct ggggtgcgaca ggcccctggc aagggactgg240  
aatgggtggc cacaatctct ggcggaggcg ccaacaccta ctaccccgac tctgtgaagg300  
gccggttcac catctctcgg gacaacgcca agaactccct gtacctgcag atgaacagcc360  
tgcggggccga ggacaccgcc gtgtactact gtgcccgga gctgtactac ttcgactact420  
ggggccaggg caccaccgtg accgtgtcct ctgcttctac caagggcccc tccgtgttc480  
ctctggctcc ttgtccaga tccacctccg agtccaccgc tgctctgggc tgcctctga540  
aggactactt ccccgagcct gtgacagtgt cctggaactc tggcgccctg acctctggcg600  
tgacacctt tccagcagtg ctgcagtct ccggcctgta ctccctgtcc tccgtctga660  
cagtgccctc cagctctctg ggcaccaaga cctacacctg taacgtggac cacaagccct720  
ccaacaccaa ggtggacaag agagtgaat ctaagtacgg ccctccctgc ccccttgtc780  
ctgcccctga atttctggg ggaccctctg tgtttctgt cccccaaag cccaaggaca840  
ccctgatgat ctcccgacc ccgaagtga cctgcgtggt ggtggatgtg tccaggaag900  
atcccagagt gcagttcaat tggtagctgg acggcgtgga agtgcacaat gccaagacca960  
agcctagaga ggaacagttc aactccacct accgggtggt gtccgtgctg accgtgtgc1020  
atcaggactg gctgaacggc aaagagtaca agtgcaaggt gtccaacaag ggccctgccca1080  
gtccatcga aaagaccatc tccaaggcca agggccagcc ccgggaaccc caggtgtaca1140  
cactgcctcc aagccaggaa gagatgacca agaaccaggt gtccctgacc tgcctctga1200

aaggcttcta cccctccgat atcgccgtgg aatgggagtc caacggccag cctgagaaca1260  
actacaagac cccccccct gtgctggact ccgacggctc ctctttctg tactctcgcc1320  
tgaccgtgga caagtcccgg tggcaggaag gcaacgtgtt ctctgcagc gtgatgcacg1380  
aggccctgca caaccactac acccagaagt ccctgtccct gtctctggga aaggccacca1440  
acttctccct gctgaagcag gccggcgacg tggaggagaa ccccggtccc atgtccgtgc1500  
ctaccaggt gctgggactg ctgctgtgt ggctgaccga cgccagatgc gacatccaga1560  
tgaccagtc cccctccagc ctgtctgct ctgtgggcga cagagtacc atcacgtgc1620  
tggcctcca gaccatcggc acctggctga cctggtatca gcagaagcct ggcaaggccc1680  
ccaagctgt gatctacacc gccaccagtc tggccgatgg cgtgccctt agatttccg1740  
gctctggctc tggcaccgac ttaccctga ccatcagctc cctgcagccc gaggacttcg1800  
ccacctacta ctgccagcag gtgtactcca tcccctggac cttggcgga ggcaccaagg1860  
tggaaatcaa gcggaccgtg gccgtccct ccgtgtcat ctccacat tccgacgagc1920  
agctgaagtc cggaaccgcc agtgtgtgt gcctgtgaa caactctac cccgcgagg1980  
ccaaggtgca gtggaagggt gacaacgcc tgcagtccg caactcccag gaatccgtga2040  
ccgagcagga ctccaaggac agcacctact ccctgtctc caccctgacc ctgtccaagg2100  
ccgactacga gaagcacaag gtgtacgct gcgaagtac ccaccagggc ctgttagcc2160  
ccgtgaccaa gtcttcaac cggggcgagt gctgataagg gccaccggt tgataatagg2220  
ctggagctc ggtggccatg ctcttgccc ctgggcctc ccccagccc ctctccct2280  
tctgcaccc gtaccccggt ggtcttgaa taaagtctga gtgggcggcc tcgagccg2340  
gaaaaaaaa aaaaaaaaa aaaaaaaaa agcatatgac taaaaaaaa aaaaaaaaa2400  
aaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaaaa attattgtt2460  
aaacattaa attctaga2478

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### 3-124      Secuencias

|           |                                            |                                                                                                                                                                            |
|-----------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-124-1   | Identificador de la secuencia              | 124                                                                                                                                                                        |
| 3-124-2   | Tipo de molécula                           | DNA                                                                                                                                                                        |
| 3-124-3   | Extensión                                  | 2602                                                                                                                                                                       |
| 3-124-4-1 | Características Localización/Calificadores | <b>source 1..2602</b><br><b>mol_type = other DNA</b><br><b>note = ACTG1 5'UTR- anti PD-1-CTSB 3'UTR-A30L70 (A1B12- anti PD-1)</b><br><b>organism = synthetic construct</b> |

### 3-124-5      Residuos

ctctgcact ctgttctcc gccgctccgc cgtcgcgtt ctctgccggt cgcaccacca60  
tggaatggtc ctgggtgttc ctgttctcc tgtccgtgac caccggcgtg cactccgaag120  
tgcagctggt ggaatctggc ggcggactgg tgcagcctgg cggtatctctg agactgtctt180  
gtgccgcctc cggcttcacc ttctccagct acatgatgag ctgggtgcga caggccccctg240  
gcaagggact ggaatgggtg gccacaatct ctggcggagg cgccaacacc tactaccccg300  
actctgtgaa gggccggttc accatctctc gggacaacgc caagaactcc ctgtacctgc360  
agatgaacag cctgcggggc gaggacaccg ccgtgtacta ctgtgcccgg cagctgtact420  
acttcgacta ctggggccag ggcaccaccg tgaccgtgtc ctctgcttct accaagggcc480  
cctcgtgtt ccctctggct cctgtctcca gatccacctc cgagtcacc gctgctctgg540  
gctgcctcgt gaaggactac ttccccgagc ctgtgacagt gtcctggaac tctggcgccc600  
tgacctctgg cgtgcacacc ttccagcag tgctgcagtc ctccggcctg tactccctgt660  
cctcgtcgt gacagtgcc tccagctctc tgggcaccaa gacctacacc tgtaacgtgg720

accacaagcc ctccaacacc aaggtggaca agagagtgga atctaagtac ggccctccct780  
gcccccttg tctgcccct gaatttctgg gcggaccctc tgtgttctg tccccccaa840  
agcccaagga caccctgatg atctcccgga ccccggaagt gacctgcgtg gtggtggatg900  
tgtcccagga agatcccag gtgcagtca attggtacgt ggacggcgtg gaagtgcaca960  
atgccaagac caagcctaga gaggaacagt tcaactccac ctaccgggtg gtgtccgtgc1020  
tgaccgtgct gcatcaggac tggctgaacg gcaaagagta caagtgaag gtgtccaaca1080  
agggcctgcc cagctccatc gaaaagacca tctcaaggc caagggccag ccccggaac1140  
cccagggtga cacactgcct ccaagccagg aagagatgac caagaaccag gtgtccctga1200  
cctgcctcgt gaaaggcttc taccctccg atatcgccgt ggaatgggag tccaacggcc1260  
agcctgagaa caactacaag accaccccc ctgtgctgga ctccgacgc tccttcttc1320  
tgtactctcg cctgaccgtg gacaagtccc ggtggcagga aggcaacgtg ttctcctgca1380  
gcgtgatgca cgaggccctg cacaaccact acaccagaa gtccctgtcc ctgtctctgg1440  
gaaaggccac caacttctcc ctgtgaagc aggccggcga cgtggaggag aaccccgcc1500  
ccatgtccgt gcctaccag gtgtgggac tgctgctgct gtggctgacc gacgccagat1560  
gcgacatcca gatgaccag tcccccca gcctgtctgc ctctgtggc gacagagtga1620  
ccatcacctg tctggcctcc cagaccatcg gcacctggc gacctggtat cagcagaagc1680  
ctggcaaggc cccaagctg ctgatctaca ccgccaccag tctggccgat ggcgtgccct1740  
ctagattctc cggctctggc tctggcaccg actttaccct gaccatcagc tcctgcagc1800  
ccgaggactt cgccacctac tactgccagc aggtgtactc catccctgg acctttggcg1860  
gaggcaccaa ggtggaaatc aagcggaccg tggccgctcc ctccgtgtc atctccac1920  
ctccgacga gcagctgaag tccggaaccg ccagtgtcgt gtgcctgctg aacaacttct1980  
accccgcgga ggccaagggt cagtggaagg tggacaacgc cctgcagtc ggcaactccc2040

aggaatccgt gaccgagcag gactccaagg acagcaccta ctccctgtcc tccaccctga2100  
ccctgtccaa ggccgactac gagaagcaca aggtgtacgc ctgcgaagt acccaccagg2160  
gcctgtctag ccccgtagc aagtcttca accggggcga gtgctgataa gggcccaccg2220  
gtctgccgtg ggccgtcgt gccagtcctg ggggcgagat cgggagaatc acgtcctgga2280  
actgcatgtt ctgcgactc ttgggactc atcttaactt ctgctgccc cagccatgtt2340  
ttcaaccatg gcatccctcc cccaattagt tccctgtcat cctcgtaac cttctctgta2400  
agtgcctggt aagcttgccc ttgctaaga actcaaaaca tagctgtgct ctactcgagc2460  
cgcggaaaaa aaaaaaaaaa aaaaaaaaaa aaaaagcata tgactaaaaa aaaaaaaaaa2520  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaattatt2580  
gtttaaacad ttaaattcta ga2602

**3-125      Secuencias**

|           |                                            |                                                                                                                                                                               |
|-----------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-125-1   | Identificador de la secuencia              | <b>125</b>                                                                                                                                                                    |
| 3-125-2   | Tipo de molécula                           | <b>DNA</b>                                                                                                                                                                    |
| 3-125-3   | Extensión                                  | <b>2611</b>                                                                                                                                                                   |
| 3-125-4-1 | Características Localización/Calificadores | <b>source 1..2611</b><br><b>mol_type = other DNA</b><br><b>note = CHCHD10 5'UTR- anti PD-1-CTSB 3'UTR-A30L70 (A15B12- anti PD-1)</b><br><b>organism = synthetic construct</b> |
| 3-125-5   | Residuos                                   | <b>ggcattgtc cccgcgacag caccgctgcc gccgtctcta aggtcgccc ggtcccaccg60</b><br><b>ccgccaccat ggaatgttc tgggtgttc tgttcttct gtccgtgacc accggcgtgc120</b>                          |

actccgaagt gcagctggtg gaatctggcg gcggactggt gcagcctggc ggatctctga180  
gactgtcttg tgccgcctcc ggcttcacct tctccagcta catgatgagc tgggtgcgac240  
agggccctgg caagggactg gaatgggtgg ccacaatctc tggcggaggc gccaacacct300  
actaccccgga ctctgtgaag ggccgggtca ccattctctg ggacaacgcc aagaactccc360  
tgtacctgca gatgaacagc ctgcggggccg aggacaccgc cgtgtactac tgtgcccggc420  
agctgtacta cttcgactac tggggccagg gcaccaccgt gaccgtgtcc tctgcttcta480  
ccaagggccc ctccgtgttc cctctggctc ctgtctccag atccacctcc gagtccaccg540  
ctgctctggg ctgcctctg aaggactact tccccgagcc tgtgacagtg tcctggaact600  
ctggcgcctt gacctctggc gtgcacacct ttccagcagt gctgcagtcc tccggcctgt660  
actcctgtc ctccgtctg acagtgcctt ccagctctct gggaccaag acctacacct720  
gtaacgtgga ccacaagccc tccaacacca aggtggacaa gagagtggaa tctaagtacg780  
gccctccctg cccccctgt cctgccctg aatttctggg cggaccctct gtgtttctgt840  
tcccccaaa gcccaaggac accctgatga tctcccgac cccgaagtg acctgcgtgg900  
tggtagatgt gtcccaggaa gatcccgagg tgcagttcaa ttggtacgtg gacggcgtgg960  
aagtgcacaa tgccaagacc aagcctagag aggaacagtt caactccacc taccgggtgg1020  
tgtccgtgct gaccgtgctg catcaggact ggctgaacgg caaagagtac aagtgaagg1080  
tgtccaacaa gggcctgccc agtccatcg aaaagacat ctccaaggcc aagggccagc1140  
cccgggaacc ccaggtgtac aactgcctc caagccagga agagatgacc aagaaccagg1200  
tgtccctgac ctgcctctg aaaggcttct acccctccga tatcgcctg gaatgggagt1260  
ccaacggcca gcctgagaac aactacaaga ccaccccc tgtgctggac tccgacggct1320  
ccttcttct gtactctgc ctgaccgtg acaagtccc gtggcaggaa ggcaacgtgt1380  
tctcctgcag cgtgatgcac gaggccctgc acaaccacta caccagaag tccctgtccc1440

tgtctctggg aaaggccacc aacttctccc tgctgaagca ggccggcgac gtggaggaga1500  
 accccggccc catgtccgtg cctaccagg tgctgggact gctgctgctg tggctgaccg1560  
 acgccagatg cgacatccag atgaccagc cccctccag cctgtctgcc tctgtggcg1620  
 acagagtgac catcacctgt ctggcctccc agaccatcgg cacctggctg acctggtatc1680  
 agcagaagcc tggcaaggcc cccaagctgc tgatctacac cgccaccagt ctggccgatg1740  
 gcgtgccctc tagattctcc ggctctggct ctggcaccga cttaccctg accatcagct1800  
 ccctgcagcc cgaggactc gccacctact actgccagca ggtgtactcc atcccctgga1860  
 ccttggcgg aggcaccaag gtggaaatca agcggaccgt ggccgctccc tccgtgtca1920  
 tctcccacc ttccgacgag cagctgaagt ccggaaccgc cagtgtcgtg tgcctgctga1980  
 acaacttcta ccccgcgag gccaaagtgc agtggaaggt ggacaacgcc ctgcagtcg2040  
 gcaactccca ggaatccgtg accgagcagg actccaagga cagcacctac tccctgtcct2100  
 ccaccctgac cctgtccaag gccgactacg agaagcaca ggtgtacgcc tgcgaagtga2160  
 cccaccagg cctgtctagc cccgtgacca agtcttcaa ccggggcgag tgctgataag2220  
 ggcccaccgg tctgccgtg gcctgtcgtg ccagtcctgg gggcgagatc gggagaatca2280  
 cgtcctggaa ctgcatgtc ttgcgactc tgggactca tcttaactc tcgctgccc2340  
 agccatgtt tcaacctgg catccctccc ccaattagt ccctgtatc ctgtcaacc2400  
 ttctctgtaa gtgcctgga agcttgcct tgcttaagaa ctcaaaacat agctgtgctc2460  
 tactcgagcc gcggaaaaa aaaaaaaaaa aaaaaaaaaa aaaagcatat gactaaaaa2520  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa2580  
 aaaattattg tttaaactt taaatttag a2611

|           |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-126-1   | Identificador de la secuencia              | 126                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 3-126-2   | Tipo de molécula                           | DNA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 3-126-3   | Extensión                                  | 1653                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3-126-4-1 | Características Localización/Calificadores | <p>source 1..1653</p> <p>mol_type = other DNA</p> <p>note = null</p> <p>note(en) = Nucleotide sequence of firefly luciferase (Fluc)</p> <p>organism = synthetic construct</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 3-126-5   | Residuos                                   | <p>atggaagacg ccaaaaacat aaagaaaggc ccggcgccat tctatccgct ggaagatgga60</p> <p>accgctggag agcaactgca taaggctatg aagagatacg ccctggttcc tggaacaatt120</p> <p>gcttttacag atgcacatat cgaggtggac atcacttacg ctgagtactt cgaaatgtcc180</p> <p>gttcggttgg cagaagctat gaaacgatat gggctgaata caaatcacag aatcgtcgta240</p> <p>tgcagtgaaa actctcttca attctttatg ccggtgttgg gcgcgttatt tatcggagtt300</p> <p>gcagttgcgc ccgcgaacga catttataat gaacgtgaat tgctcaacag tatgggcatt360</p> <p>tcgcagccta ccgtggtgtt cgtttccaaa aaggggttgc aaaaaatttt gaacgtgcaa420</p> <p>aaaaagctcc caatcatcca aaaaattatt atcatggatt ctaaaacgga ttaccaggga480</p> <p>tttcagtcga tgtacacgtt cgtcacatct catctacctc ccggttttaa tgaatacgat540</p> <p>tttgtccag agtccttcga tagggacaag acaattgcac tgatcatgaa ctctctgga600</p> <p>tctactggtc tgcctaaagg tgcgctctg cctcatagaa ctgcctgcgt gagattctcg660</p> <p>catgccagag atcctatttt tggcaatcaa atcattccgg atactgcgat ttaagtgt720</p> <p>gttcattcc atcacggttt tggaatgttt actacactcg gatatttgat atgtggattt780</p> |

cgagtcgtct taatgtatag attgaagaa gagctgttc tgaggagcct tcaggattac840  
aagattcaaa gtgcgctgct ggtgccaacc ctattctcct tcttcgcaa aagcactctg900  
attgacaaat acgatttatc taatttacac gaaattgctt ctggtggcgc tcccctctct960  
aaggaagtcg gggaagcggg tgccaagagg ttccatctgc caggtatcag gcaaggatat1020  
gggctcactg agactacatc agctattctg attacacccg agggggatga taaaccgggc1080  
gcggtcggta aagttgtcc atttttgaa gcgaagggtg tggatctgga taccgggaaa1140  
acgctgggcg ttaatcaaag aggcgaactg tgtgtgagag gtcctatgat tatgtccggt1200  
tatgtaaaca atccggaagc gaccaacgcc ttgattgaca aggatggatg gctacattct1260  
ggagacatag ctactggga cgaagacgaa cacttctca tcgttgaccg cctgaagtct1320  
ctgattaagt acaaaggcta tcaggtggct cccgctgaat tggaatccat ctgctcaa1380  
cacccaaca tctcgacgc aggtgtcgca ggtctccc acgatgacgc cggatgaact1440  
cccgccgccg ttgtgttt ggagcacgga aagacgatga cggaaaaaga gatcgtggat1500  
tacgtcgcca gtcaagtaac aaccgcgaaa aagttgcgcg gaggagtgt gttgtggac1560  
gaagtaccga aaggtcttac cggaaaactc gacgcaagaa aaatcagaga gatcctcata1620  
aaggccaaga agggcggaag gatcgccgtg taa1653

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|              |                                            |                                                      |
|--------------|--------------------------------------------|------------------------------------------------------|
| <b>3-127</b> | <b>Secuencias</b>                          |                                                      |
| 3-127-1      | Identificador de la secuencia              | <b>127</b>                                           |
| 3-127-2      | Tipo de molécula                           | <b>DNA</b>                                           |
| 3-127-3      | Extensión                                  | <b>2630</b>                                          |
| 3-127-4-1    | Características Localización/Calificadores | <b>source 1..2630</b><br><b>mol_type = other DNA</b> |

**note = null**

**note(en) = HGF-OS2 expression vector CHCHD10 5'UTR-hHGF-CTSB 3'UTR-A30L70 (A16B12-HGF-C**

**organism = synthetic construct**

3-127-5    Residuos

ccgctgccgc cgtctctaag gtcgcccggg tcccaccgcc gccaccgcta gcgccaccat60  
gtgggtcacc aaactgctgc ccgccctgct gctgcagcac gtgctcctgc acctgctgct120  
gctgcctatc gccatccctt acgccgaagg ccagagaaag cggagaaata ccattcacga180  
atttaagaag agcgccaaga ccacactgat caagatcgac cctgccctga aaatcaagac240  
caagaaagtg aacacagccg accaatgcgc taatagatgc acaagaaaca aaggcctgcc300  
tttcacctgc aaggccctcg tgctgataa ggccagaaag cagtgcctgt ggtcccctt360  
caacagcatg agcagcggcg tgaagaaaga attcgggtcac gagttcgacc tgtacgagaa420  
taaggactac attagaaact gcatcatcgg caagggccgg agctacaagg gcaccgtgag480  
catcaccaag tctggcatca agtgccagcc atggagtcc atgatccctc atgagcacag540  
cttctgccca agctcttacc ggggaaagga tctgcaggag aactattgta gaaatcccag600  
aggcgaggaa ggaggaccct ggtgttttac cagcaacca gaggtgcggt acgagggtg660  
cgacataccc cagtgcagcg aggtggaatg catgacatgc aacggcgaga gctaccgggg720  
cctgatggac cacacagaga gcggcaaaat ctgccaaaga tgggatcacc agaccctca780  
taggcacaag ttctgcccg agagataccc tgacaagggc ttcgacgaca attactgccg840  
gaaccctgat ggacagccta gacctggtg ctacaccctg gaccctcaca ccagatggga900  
atactgcgcc atcaagacat gtgccgataa caccatgaac gacaccgatg tgccactcga960  
gacaactgag tgtatccagg gccagggcga gggctacagg ggcaccgtga acaccatctg1020  
gaacggcatc cttgtcagc ggtgggacag ccaatacccc cacgaacatg atatgacccc1080

agaaaacttc aagtgcaaag atctgcggga aaactactgt agaaaccctg acggctccga1140  
gagcccttgg tgctcacca cgcacctaa catcaggggtg ggctactgta gccagatccc1200  
caactgagc atgagccacg gtcaggactg ctacagagga aacggcaaga attacatggg1260  
caacctgagc cagaccagaa gcggcctgac ctgcagcatg tgggacaaaa acatggaaga1320  
tctgcaccgg cacatctttt gggagcctga cgccagcaag ctgaatgaga actactgtcg1380  
gaaccctgac gacgatgctc acggcccttg gtgctacaca ggcaaccctc tgatcccttg1440  
ggactattgt cctattagca ggtgtgaagg cgacacgacc cctacaatcg tgaacctgga1500  
tcacccagt atcagctgtg ctaaaacaaa gcaactgaga gtggtgaatg gtatcccgac1560  
ccggaccaac atcggatgga tggtcagcct gcggtacaga aacaagcaca tctgcggcgg1620  
tagcctgatc aaggaatcct ggggttgac agccagacag tgtttccca gcagagatct1680  
gaaggactac gaggcctggc tgggcatcca cgacgtgcac ggcagaggcg acgagaagtg1740  
caagcagggt ctgaacgtgt cccagctggt gtacggcccc gagggctctg atctggttct1800  
gatgaagctt gctagaccg ctgtctgga tgacttcgtg tccaccatcg acctgccaaa1860  
ttacggatgt acaattcctg aaaagacctc ctgttctgtg tacggctggg gctacaccgg1920  
actcatcaac tatgacggcc tgctgagagt ggcccacctg tatatcatgg gcaacgagaa1980  
gtgcagccag caccatagag gcaaggtgac cctgaacgag tctgaaatct gcgccggagc2040  
cgagaaaatc ggaatctggc cctgcgaagg agattacggc ggccctcttg tctgcgagca2100  
gcacaagatg agaatggtgc tgggcgtgat cgtgccggc agaggctgcg ccatccctaa2160  
ccggcctgga atcttcgtg gcgtggccta ttacgcaaaa tggatccaca aaatcatcct2220  
gacatacaag gtcccacagt ctgataagg gccaccgggt tctgccgtgg gcctgtcgtg2280  
ccagtcctgg gggcgagatc gggagaatca cgtcctggaa ctgcatgttc ttgcgactct2340  
tgggacttca tcttaacttc tcgtgcccc agccatgtt tcaaccatgg catccctccc2400

ccaattagtt cctgtcatc ctcgtcaacc ttctctgtaa gtgcctggta agcttgccct2460

tgcttaagaa ctcaaaacat agctgtgctc taccgcgga aaaaaaaaaa aaaaaaaaaa2520

aaaaaaaaagc atatgactaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa2580

aaaaaaaaaa aaaaaaaaaa aaaaaaaagt taaacattt aaattctaga2630

**3-128      Secuencias**

|           |                                            |                                                                                                                                                                        |
|-----------|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-128-1   | Identificador de la secuencia              | <b>128</b>                                                                                                                                                             |
| 3-128-2   | Tipo de molécula                           | <b>RNA</b>                                                                                                                                                             |
| 3-128-3   | Extensión                                  | <b>2187</b>                                                                                                                                                            |
| 3-128-4-1 | Características Localización/Calificadores | <b>source 1..2187</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = mRNA sequence of hHGF protein</b><br><b>organism = synthetic construct</b> |

3-128-5      Residuos

atgtgggtga ccaaactcct gccagccctg ctgctgcagc atgtcctcct gcattcctct60

ctgctcccca tcgcatccc ctatgcagag ggacaaagga aaagaagaaa tacaattcat120

gaattcaaaa aatcagcaaa gactacccta atcaaatag atccagcact gaagataaaa180

acaaaaaaag tgaatactgc agaccaatgt gctaatagat gtactaggaa taaaggact240

ccattcactt gcaaggctt tgttttgat aaagcaagaa aacaatgcct ctggttcccc300

ttcaatagca tgtcaagtg agtgaaaaaa gaattggcc atgaattga cctctatgaa360

aacaaagact acattagaaa ctgcatcatt ggtaaaggac gcagctacaa gggaacagta420

tctatcacta agagtggcat caaatgtcag ccctggagtt ccatgatacc acacgaacac480  
agctttttgc cttcagagcta tcggggtaaa gacctacagg aaaactactg tcgaaatcct540  
cgaggggaag aagggggacc ctggtgtttc acaagcaatc cagaggtacg ctacgaagtc600  
tgtgacattc ctcaagtgtc agaagttgaa tgcattgacct gcaatgggga gagttatcga660  
gggtcatg atcatacaga atcaggcaag attgtcagc gctgggatca tcagacacca720  
caccggcaca aattcttgcc tgaaagatat cccgacaagg gctttgatga taattattgc780  
cgcaatccc atggccagcc gaggccatgg tgctatactc ttgacctca cccccctgg840  
gagtactgtg caattaaaac atgcgctgac aatactatga atgacactga tgttccttg900  
gaaacaactg aatgcatcca aggtcaagga gaaggctaca ggggcactgt caataccatt960  
tggaatggaa ttccatgtca gcgtgggat tctcagtatc ctacagagca tgacatgact1020  
cctgaaaatt tcaagtcaa ggacctacga gaaaattact gccgaaatcc agatgggtct1080  
gaatcacct ggtgttttac cactgatcca aacatccgag ttggctactg ctcccaaatt1140  
ccaaactgtg atatgtcaca tggacaagat tgtatcgtg ggaatggcaa aaattatatg1200  
ggcaacttat ccaaacaag atctggacta acatgttcaa tgtgggacaa gaacatggaa1260  
gacttacatc gtcatatct ctgggaacca gatgcaagta agtgaatga gaattactgc1320  
cgaaatccag atgatgatgc tcatggaccc tgggtctaca cgggaaatcc actcattcct1380  
tggtgattatt gccctatttc tcgtgtgaa ggtgatacca cacctacaat agtcaattta1440  
gacctccc taatatcttg tgccaaaacg aaacaattgc gagttgtaa tgggattcca1500  
acacgaacaa acataggatg gatggtagt ttgagataca gaaataaaca tatctcgga1560  
ggatcattga taaaggagag ttgggttct actgcacgac agtgtttccc ttctcgagac1620  
ttgaaagatt atgaagctg gcttgaatt catgatgtcc acggaagagg agatgagaaa1680  
tgcaaacagg ttctaatgt ttccagctg gtatatggcc ctgaaggatc agatctggtt1740

ttaatgaagc ttgccaggcc tgctgtcctg gatgatttg ttagtacgat tgattacct1800  
aattatggat gcacaattcc tgaaaagacc agttgcagtg tttatggctg gggctacact1860  
ggattgatca actatgatgg cctattacga gtggcacatc tctatataat gggaaatgag1920  
aaatgcagcc agcatcatcg agggaaggtg actctgaatg agtctgaaat atgtgctggg1980  
gctgaaaaga ttggatcagg accatgtgag ggggattatg gtggcccact tgttgtgag2040  
caacataaaa tgagaatggt tcttggtgtc attgttcctg gtcgtggatg tgccattcca2100  
aatcgtcctg gtattttgt ccgagtagca tattatgcaa aatggataca caaaattatt2160  
ttaacatata aggtaccaca gtcatag2187

**3-129    Secuencias**

|           |                                            |                                                                                                                                                                                          |
|-----------|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-129-1   | Identificador de la secuencia              | <b>129</b>                                                                                                                                                                               |
| 3-129-2   | Tipo de molécula                           | <b>RNA</b>                                                                                                                                                                               |
| 3-129-3   | Extensión                                  | <b>2187</b>                                                                                                                                                                              |
| 3-129-4-1 | Características Localización/Calificadores | <b>source 1..2187</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = hHGF codon-optimized mRNA sequence 1 (hHGF-OS1)</b><br><b>organism = synthetic construct</b> |

**3-129-5    Residuos**

atgtgggtga ccaaactgct ccccgctctg ctgctgcagc atgtgctgct ccacctgctg60  
ctgctgcaa tcgcatccc ctacgtgaa ggacagcggg agcgcagaaa cacaattcac120  
gaattcaaga agtccgcaa aacaacactg atcaagatcg accctgccct gaaaatcaaa180

accaagaagg tgaactgc cgatcagtc gccaacagat gcacaagaaa caaaggcctg240  
cccttcacat gcaaggcctt tgtgttcgac aaggccagaa agcagtcct gtggttcct300  
ttcaacagca tgagctctgg cgtgaagaaa gagttcggcc acgaattcga cctgtacgag360  
aacaaggatt acatcagaaa ttgtatcatc ggcaagggca gaagctacaa aggcacagtg420  
tccatcacca aaagcggcat taagtgtcag cttggagca gcatgatccc tcacgagcac480  
agcttcctgc ctgacttta cagaggcaag gacctgcagg agaattactg ccggaaccct540  
agaggcgagg aaggcgggcc ttggtgctt accagcaacc ctgagggtcg gtacgagggt600  
tgtgacatcc ccagtgagc cgaagtggaa tgcatgacct gtaatggcg gagctacaga660  
ggcctcatgg accatacaga gagcggaaag atttgtcaaa gatgggatca ccagacacct720  
cacagacaca aattcctgcc cgaaagatat cctgacaagg gcttcgacga caactactgc780  
agaaatcctg atggccaacc cagacctgg tgctacaccc tggatcctca taccagatgg840  
gagtactgtg ccatcaagac ctgcgctgat aatacatga acgacaccga tgtgcctctg900  
gaaacaaccg agtgcacca gggacagggc gaaggctacc ggggcaccgt gaacaccatc960  
tggaacggca tcccctgcc gagatgggac agccagtacc ccacgaaca cgatatgacc1020  
cctgagaact tcaagtcaa ggacctgaga gaaaattact gcagaaacc agacggaagc1080  
gagtctcctt ggtgtttac caccgacccc aacatccggg tgggttactg cagccaaatc1140  
cccaattgcg acatgagcca cgccaggac tgctaccggg gaaacggcaa aaactacatg1200  
ggcaatctga gccagaccg gagcggctg acctgctcca tgtgggataa gaacatggaa1260  
gatctgcacc ggcacatct ctgggagcct gacgcttcta agtgaacga gaactactgt1320  
aggaaccag acgacgatgc ccacggtccc tgggtctaca ccggcaaccc gctgatccct1380  
tgggactatt gtcctatcag ccgctgcgag ggcgatacaa cacctacat cgtgaacctg1440  
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acacggacca acatcggatg gatggtctcc ctgagatacc ggaacaagca catctcgggc1560  
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ctgaaggact atgaggcctg gctgggaatc cacgacgtgc acggcagagg cgacgagaag1680  
tgcaagcaag tgctgaacgt gtcccagctg gtgtacggcc ctgagggatc tgatctggc1740  
ctgatgaaac tggccagacc cgccgtgctg gacgactttg tgtccacat cgacctgcct1800  
aactacggct gcaccatccc tgaaaagacc agctgcagcg tgtacggctg gggctataca1860  
ggcctgatca actacgacgg tctgctcgg gttgctcacc tgtacatcat gggcaacgag1920  
aagtgcagcc agcaccacag aggaaaggtt acacttaacg agagcgagat ctgcgccggc1980  
gccgagaaaa tcggctccgg cccttgtgaa ggcgactacg gaggccctct ggtgtgcgaa2040  
cagcacaaga tgagaatggt gctgggcgtg atcgtgcccg gaagaggctg tgcaatccct2100  
aataggcccc gcatttcgt gcgggtggcc tactacgcca agtggatcca caagatcatc2160  
ctgacgtaca aggtgcctca gagctga2187

|              |                                            |                                                                                                                                                                                          |
|--------------|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>3-130</b> | <b>Secuencias</b>                          |                                                                                                                                                                                          |
| 3-130-1      | Identificador de la secuencia              | <b>130</b>                                                                                                                                                                               |
| 3-130-2      | Tipo de molécula                           | <b>RNA</b>                                                                                                                                                                               |
| 3-130-3      | Extensión                                  | <b>2187</b>                                                                                                                                                                              |
| 3-130-4-1    | Características Localización/Calificadores | <b>source 1..2187</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = hHGF codon-optimized mRNA sequence 2 (hHGF-OS2)</b><br><b>organism = synthetic construct</b> |

3-130-5 Residuos

atgtgggtca ccaaactgct gcccgccctg ctgctgcagc acgtgctcct gcacctgctg60  
ctgctgccta tcgccatccc ttacgccgaa ggccagagaa agcggagaaa taccattcac120  
gaatttaaga agagcgccaa gaccacactg atcaagatcg accctgccct gaaaatcaag180  
accaagaaag tgaacacagc cgaccaatgc gctaatagat gcacaagaaa caaaggcctg240  
cctttcacct gcaaggcctt cgtgttcgat aaggccagaa agcagtcct gtggttcccc300  
ttcaacagca tgagcagcgg cgtgaagaaa gaattcggtc acgagttcga cctgtacgag360  
aataaggact acattagaaa ctgcatcatc ggcaagggcc ggagctacaa gggcaccgtg420  
agcatcacca agtctggcat caagtgccag ccatggagtt ccatgatccc tcatgagcac480  
agcttctgc caagcttta ccggggaaag gatctgcagg agaactattg tagaaatccc540  
agaggcgagg aaggaggacc ctggtgttt accagcaacc cagaggtcg gtacgagggtg600  
tgcgacatac ccagtgtag cgaggtggaa tgcatgacat gcaacggcga gagtaccgg660  
ggcctgatgg accacacaga gagcggcaaa atctgcaaa gatgggatca ccagaccct720  
cataggcaca agttcctgcc cgagagatac cctgacaagg gttcgacga caattactgc780  
cggaaccctg atggacagcc tagacctgg tgctacacc tggaccctca caccagatgg840  
gaatactcg ccatcaagac atgtgccgat aacaccatga acgacaccga tgtgccactc900  
gagacaactg agtgtatcca gggccagggc gagggctaca ggggcaccgt gaacaccatc960  
tggaacggca tcccttgta gcggtgggac agccaatacc ccacgaaca tgatatgacc1020  
ccagaaaact tcaagtcaa agatctgcgg gaaaactact gtagaaacc tgacggctcc1080  
gagagccctt ggtgcttac caccgaccct aacatcaggg tgggctactg tagccagatc1140  
cccaactgag acatgagcca cggtcaggac tgctacagag gaaacggcaa gaattacatg1200  
ggcaacctga gccagaccag aagcggcctg acctgcagca tgtgggacaa aaacatggaa1260

gatctgcacc ggcacatctt ttgggagcct gacgccagca agctgaatga gaactactgt1320  
cggaaccctg acgacgatgc tcacggccct tgggtgctaca caggcaaccc tctgatccct1380  
tgggactatt gtcctattag caggtgtgaa ggcgacacga cccctacaat cgtgaacctg1440  
gatcacccag tgatcagctg tgctaaaaca aagcaactga gagtggtgaa tggatatccg1500  
acccggacca acatcggatg gatggtcagc ctgcggtaca gaaacaagca catctgcggc1560  
ggtagcctga tcaaggaatc ctgggtgttg acagccagac agtgtttcc cagcagagat1620  
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tgcaagcagg ttctgaacgt gtcccagctg gtgtacggcc ccgagggctc tgatctggtt1740  
ctgatgaagc ttgctagacc cgctgtgctg gatgacttcg tgtccaccat cgacctgcca1800  
aattacggat gtacaattcc tgaagagacc tctgttctg tgtacggctg gggctacacc1860  
ggactcatca actatgacgg cctgctgaga gtggcccacc tgtatatcat gggcaacgag1920  
aagtgcagcc agcaccatag aggcaagggtg accctgaacg agtctgaaat ctgcgccgga1980  
gccgagaaaa tcggtatcgg cccctgcgaa ggagattacg gcggccctct ggtctgcgag2040  
cagcacaaga tgagaatggt gctgggcgtg atcgtgcccg gcagaggctg cgccatccct2100  
aaccggcctg gaatcttctg gcgcgtggcc tattacgcca aatggatcca caaaatcatc2160  
ctgacataca aggtcccaca gtcttga2187

**3-131      Secuencias**

|           |                                            |                       |
|-----------|--------------------------------------------|-----------------------|
| 3-131-1   | Identificador de la secuencia              | <b>131</b>            |
| 3-131-2   | Tipo de molécula                           | <b>RNA</b>            |
| 3-131-3   | Extensión                                  | <b>2187</b>           |
| 3-131-4-1 | Características Localización/Calificadores | <b>source 1..2187</b> |

**mol\_type = other RNA**

**note = null**

**note(en) = hHGF codon-optimized mRNA sequence 3 (hHGF-OS3)**

**organism = synthetic construct**

3-131-5 Residuos

atgtgggtga ccaagctgct gcccgccctg ctctgcagc acgtgctgct gcacctgctc60  
ctgctgcca tcgcatccc ctacgccgag gggcagagaa agagaagaaa caccatccac120  
gagttcaaga agagcgccaa gaccaccctg atcaagatcg accccgccct gaagatcaag180  
accaagaagg tgaacaccgc cgatcagtc gccaacagat gcacaagaaa caagggcctg240  
cccttcacct gcaaggcctt cgtgttcgac aaggctagaa agcagtcct gtggttcccc300  
ttcaacagca tgagcagcgg cgtgaagaag gagttcggcc acgagttcga cctgtacgag360  
aacaaggact acatcagaaa ctgcatcatc ggcaagggca gaagctaaa gggcaccgtg420  
agcatcacca agagcgcat caagtgtcag ccctggagca gcatgatccc ccatgagcac480  
agcttctgc ctacagcta cagagggaag gacctgcaag agaactactg cagaaaccct540  
agaggcgagg agggcgggcc ttggtgttc acaagcaatc ccgaggtgag atacgaggtg600  
tgcgacatcc ctactgcag cgaggtggag tgcattgacct gcaacggcga aagctataga660  
ggcctgatgg accacaccga gagcggcaag attgtcagc ggtgggatca ccaaaccctc720  
cacagacaca agttcctgcc cgagagatac cccgacaagg gcttcgacga caattactgt780  
agaaaccctg acgggcagcc tagaccctgg ttttacccc tggaccccca cacaagatgg840  
gagtactcgc ccatcaagac ctgcgccgac aacaccatga acgacaccga cgtgcccctg900  
gagaccaccg agtgcattca aggccaaggc gagggctaca gaggcaccgt gaacaccatc960  
tggaacggca ttcctgtca gagatgggac agccaatacc cccatgaaca cgatatgacc1020

cccgagaact tcaagtgcaa ggacctgaga gagaactact gccggaaccc cgtggcagc1080  
 gaatcccctt ggtgcttcac caccgacccc aacatcagag tgggctactg cagccaaatc1140  
 cccaactgcg acatgagcca cggccaagac tgttacagag ggaacggcaa gaactacatg1200  
 ggcaacctga gccaaacaag aagcggcctg acctgcagca tgtgggacaa gaacatggag1260  
 gacctgcaca gacacatctt ctgggagccc gacgctagca agctgaacga gaactactgt1320  
 cggaaccccg acgacgatgc ccacggcccc tggtgctaca ccggcaaccc cctgatcccc1380  
 tgggactact gccccatcag cagatgcgag ggcgacacca cccccacat cgtgaacctg1440  
 gaccaccccg tgatcagctg tgccaagacc aagcaactga gagtgggtgaa cggcatcccc1500  
 acaagaacca acattggctg gatggtgagc ctgagataca gaaacaagca catctgcggc1560  
 ggcagcctga tcaaggagag ctgggtgctg accgctagac agtgcttccc tagcagagac1620  
 ctgaaggact acgaggcctg gctgggcatc cacgacgtgc acggcagagg cgacgagaag1680  
 tgtaacaag tgctgaacgt gagccaactg gtgtacggcc ccgagggcag cgacctggtg1740  
 ctgatgaagc tggctagacc cgccgtgctg gacgactcg tgagcaccat cgacctgccc1800  
 aactacggct gcaccatccc cgagaagaca agctgcagcg tgtacggctg gggctacacc1860  
 ggcctgatca actacgacgg cctgctgaga gtggcccacc tgtacatcat gggcaacgag1920  
 aagtgcagcc aacaccaccg gggcaaagtg accctgaacg agagcgagat ctgcgccggg1980  
 gctgagaaaa tcggcagcgg cccctgcgag ggggactacg ggggcccct ggtgtgcgag2040  
 cagcacaaga tgagaatggt gctgggcgtg atcgtgcccg gcagaggctg cgccatcccc2100  
 aacagacccg gcatcttctg gagagtggcc tactacgcca agtggatcca caagatcatc2160  
 ctgacctaca aggtgcctca gagctga2187

|           |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3-132-1   | Identificador de la secuencia              | <b>132</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 3-132-2   | Tipo de molécula                           | <b>RNA</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 3-132-3   | Extensión                                  | <b>2626</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 3-132-4-1 | Características Localización/Calificadores | <b>source 1..2626</b><br><b>mol_type = other RNA</b><br><b>note = null</b><br><b>note(en) = CHCHD10 5'UTR- hHGF-CTSB 3'UTR-A120</b><br><b>organism = synthetic construct</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 3-132-5   | Residuos                                   | aggggaagctt ccgctgccgc cgtctctaag gtcgcccggg tcccaccgcc gccaccgccg60<br>ccaccatgtg ggtcacaaaa ctgctgcccg ccctgtgtgt gcagcacgtg ctctgcacc120<br>tgctgtgtgt gcctatcgcc atcccttacg ccgaaggcca gagaaagcgg agaaatacca180<br>ttcacgaatt taagaagagc gccaaagacca cactgatcaa gatcgaccct gccctgaaaa240<br>tcaagaccaa gaaagtgaac acagccgacc aatgcgctaa tagatgcaca agaaacaaag300<br>gcctgccttt cacctgcaag gccttcgtgt tcgataaggc cagaaagcag tgcctgttgt360<br>tcccctcaa cagcatgagc agcggcggtga agaaagaatt cggtcacgag ttcgacctgt420<br>acgagaataa ggactacatt agaaactgca tcatcggcaa gggccggagc tacaagggca480<br>ccgtgagcat caccaagtct ggcatcaagt gccagccatg gaggttcatg atccctcatg540<br>agcacagctt cctgccaagc tcttaccggg gaaaggatct gcaggagaac tattgtagaa600<br>atcccagagg cgaggaagga ggaccctggt gttttaccag caaccagag gtgcggtacg660<br>aggtgtgcga cataccccag tcagcagagg tggaatgcat gacatgcaac ggcgagagct720<br>accggggcct gatggaccac acagagagcg gcaaaatctg ccaaagatgg gatcaccaga780 |

cccccatag gcacaagttc ctgcccgaga gataccctga caagggcttc gacgacaatt840  
actgccggaa cctgatgga cagcctagac ctgtgtgcta caccctggac cctcacacca900  
gatgggaata ctgcgccatc aagacatgtg ccgataacac catgaacgac accgatgtgc960  
cactcgagac aactgagtgt atccagggcc agggcgaggg ctacaggggc accgtgaaca1020  
ccatctggaa cggcattcct tgtcagcggg gggacagcca ataccccac gaacatgata1080  
tgaccccaga aaacttcaag tgcaaagatc tgcgggaaaa ctactgtaga aaccctgacg1140  
gctccgagag cccttggtgc ttaccaccg accctaacat caggggtggc tactgtagcc1200  
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tggaagatct gcaccggcac atctttggg agcctgacgc cagcaagctg aatgagaact1380  
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tcccgaaccg gaccaacatc ggatggatgg tcagcctgcg gtacagaaac aagcacatct1620  
gcggcggtag cctgatcaag gaatcctggg tgtgacagc cagacagtgt ttccagca1680  
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tgccaaatta cggatgtaca attcctgaaa agacctctg ttctgtgtac ggctggggct1920  
acaccggact catcaactat gacggcctgc tgagagtggc ccacctgtat atcatgggca1980  
acgagaagtg cagccagcac catagaggca aggtgacct gaacgagtct gaaatctgcg2040  
ccggagccga gaaaatcga tctggccct gcgaaggaga ttacggcggc cctctggtct2100

gcgagcagca caagatgaga atggtgctgg gcgtgatcgt gcccggcaga ggctgcgcca2160  
tccctaaccg gcctggaatc ttcgtgcgcg tggcctatta cgccaaatgg atccacaaaa2220  
tcacctgac atacaaggtc ccacagtctt gaaccgggtc tgccgtgggc ctgtcgtgcc2280  
agtcctgggg gcgagatcgg gagaatcacg tctggaact gcatgttctt gcgactcttg2340  
ggacttcac ttaacttctc gctgcccag ccatgtttc aaccatggca tccctcccc2400  
aattagttc ctgtatcct cgtcaacctt ctctgaagt gcctggaag ctgccccttg2460  
ctaagaact caaacatag ctgtgctcta ccgcggaaaa aaaaaaaaaa aaaaaaaaaa2520  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa2580  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaattat ttctag2626

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