

LISTADO DE SECUENCIAS

<110> Boehringer Ingelheim International GMBH

<120> ANTICUERPOS ANTI-SEMA3A Y SUS USOS PARA TRATAR ENFERMEDADES OCULARES

<130> 01-3361

<150> EP19173454.0

<151> 09-05-2019

<160> 22

<170> BiSSAP 1.3.6

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<213> Secuencia artificial

<220>

<223> HCDR1

<400> 1

Ser Tyr Tyr Met Ser

1

5

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<211> 17

<212> PRT

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<220>

<223> HCDR2

<400> 2

Thr Ile Ile Lys Ser Gly Gly Tyr Ala Tyr Tyr Pro Asp Ser Val Lys

1

5

10

15

Asp

<210> 3

<211> 8

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<220>

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Gly Gly Gln Gly Ala Met Asp Tyr
1 5

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Arg Ala Ser Gln Ser Ile Gly Asp Tyr Leu His
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<220>
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Tyr Ala Ser Gln Ser Ile Ser
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Gln Gln Gly Tyr Ser Phe Pro Tyr Thr
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<220>
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<400> 7
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Thr	Phe	Ser	Ser	Tyr
			20					25					30		
Tyr	Met	Ser	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val
		35					40					45			
Ser	Thr	Ile	Ile	Lys	Ser	Gly	Gly	Tyr	Ala	Tyr	Tyr	Pro	Asp	Ser	Val
	50					55					60				
Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Leu	Tyr
65					70				75					80	
Leu	Gln	Met	Ser	Ser	Leu	Arg	Ala	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
				85				90					95		
Val	Arg	Gly	Gly	Gln	Gly	Ala	Met	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Thr
			100					105					110		
Val	Thr	Val	Ser	Ser											
			115												

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 <212> PRT
 <213> Secuencia artificial

<220>
 <223> VH - variante 2

Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Pro	Gly	Gly
1				5					10					15	
Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Pro	Phe	Ser	Ser	Tyr
			20					25					30		
Tyr	Met	Ser	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val
		35					40					45			
Ser	Thr	Ile	Ile	Lys	Ser	Gly	Gly	Tyr	Ala	Tyr	Tyr	Pro	Asp	Ser	Val
	50					55					60				
Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Leu	Tyr
65					70				75					80	
Leu	Gln	Met	Ser	Ser	Leu	Arg	Ala	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
				85				90					95		
Val	Arg	Gly	Gly	Gln	Gly	Ala	Met	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Thr
			100					105					110		
Val	Thr	Val	Ser	Ser											
			115												

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 <213> Secuencia artificial

<220>
 <223> VH - variante 3

Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Leu	Gly	Gly
1				5					10					15	

Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Thr	Phe	Ser	Ser	Tyr
			20					25					30		
Tyr	Met	Ser	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val
		35					40					45			
Ser	Thr	Ile	Ile	Lys	Ser	Gly	Gly	Tyr	Ala	Tyr	Tyr	Pro	Asp	Ser	Val
	50					55					60				
Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Leu	Tyr
65					70					75					80
Leu	Gln	Met	Asn	Ser	Leu	Arg	Ala	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
			85						90					95	
Val	Lys	Gly	Gly	Gln	Gly	Ala	Met	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Thr
			100					105					110		
Val	Thr	Val	Ser	Ser											
			115												

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 <212> PRT
 <213> Secuencia artificial

<220>
 <223> VH- variante 4

Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Leu	Gln	Leu	Gly	Gly
1				5					10					15	
Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Thr	Phe	Ser	Ser	Tyr
			20					25					30		
Tyr	Met	Ser	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val
		35					40					45			
Ser	Thr	Ile	Ile	Lys	Ser	Gly	Gly	Tyr	Ala	Tyr	Tyr	Pro	Asp	Ser	Val
	50					55					60				
Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Leu	Asn
65					70					75					80
Leu	Gln	Met	Asn	Ser	Leu	Arg	Ala	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
			85						90					95	
Val	Lys	Gly	Gly	Gln	Gly	Ala	Met	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Thr
			100					105					110		
Val	Thr	Val	Ser	Ser											
			115												

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 <212> PRT
 <213> Secuencia artificial

<220>
 <223> VL - variante a

Glu	Ile	Val	Leu	Thr	Gln	Ser	Pro	Ala	Thr	Leu	Ser	Leu	Ser	Pro	Gly
1				5					10					15	

Glu	Arg	Ala	Thr	Leu	Ser	Cys	Arg	Ala	Ser	Gln	Ser	Ile	Gly	Asp	Tyr
			20					25					30		
Leu	His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala	Pro	Arg	Leu	Leu	Ile
		35					40					45			
Lys	Tyr	Ala	Ser	Gln	Ser	Ile	Ser	Gly	Ile	Pro	Ala	Arg	Phe	Ser	Gly
		50				55					60				
Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Thr	Ser	Leu	Glu	Pro
65					70					75					80
Glu	Asp	Phe	Ala	Val	Tyr	Tyr	Cys	Gln	Gln	Gly	Tyr	Ser	Phe	Pro	Tyr
				85					90					95	
Thr	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Glu	Ile	Lys					
			100					105							

<210> 12
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 <212> PRT
 <213> Secuencia artificial

<220>
 <223> VL - variante b

Glu	Ile	Val	Leu	Thr	Gln	Ser	Pro	Ala	Thr	Leu	Ser	Leu	Ser	Pro	Gly
1				5					10					15	
Glu	Arg	Ala	Thr	Leu	Ser	Cys	Arg	Ala	Ser	Gln	Ser	Ile	Gly	Asp	Tyr
			20					25					30		
Leu	His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala	Pro	Arg	Leu	Leu	Ile
		35					40					45			
Tyr	Tyr	Ala	Ser	Gln	Ser	Ile	Ser	Gly	Ile	Pro	Ala	Arg	Phe	Ser	Gly
		50				55					60				
Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Glu	Pro
65					70					75					80
Glu	Asp	Phe	Ala	Val	Tyr	Tyr	Cys	Gln	Gln	Gly	Tyr	Ser	Phe	Pro	Tyr
				85					90					95	
Thr	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Glu	Ile	Lys					
			100					105							

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 <212> PRT
 <213> Secuencia artificial

<220>
 <223> VL- variante c

Glu	Ile	Val	Leu	Thr	Gln	Ser	Pro	Ala	Thr	Leu	Ser	Leu	Ser	Pro	Gly
1				5					10					15	
Glu	Arg	Ala	Thr	Leu	Ser	Cys	Arg	Ala	Ser	Gln	Ser	Ile	Gly	Asp	Tyr
			20					25					30		
Leu	His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala	Pro	Arg	Leu	Leu	Ile
		35					40					45			

Lys	Tyr	Ala	Ser	Gln	Ser	Ile	Ser	Gly	Ile	Pro	Ala	Arg	Phe	Ser	Gly
50						55					60				
Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Glu	Pro
65					70					75					80
Glu	Asp	Phe	Ala	Val	Tyr	Tyr	Cys	Gln	Gln	Gly	Tyr	Ser	Phe	Pro	Tyr
				85					90					95	
Thr	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Glu	Ile	Lys					
			100					105							

<210> 14
 <211> 446
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Cadena pesada- Clon I

<400> 14

Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Pro	Gly	Gly
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Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Thr	Phe	Ser	Ser	Tyr
			20					25					30		
Tyr	Met	Ser	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val
		35					40					45			
Ser	Thr	Ile	Ile	Lys	Ser	Gly	Gly	Tyr	Ala	Tyr	Tyr	Pro	Asp	Ser	Val
	50					55					60				
Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Leu	Tyr
65					70				75						80
Leu	Gln	Met	Ser	Ser	Leu	Arg	Ala	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
				85					90					95	
Val	Arg	Gly	Gly	Gln	Gly	Ala	Met	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Thr
			100					105					110		
Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu
		115					120					125			
Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu	Gly	Cys
	130					135					140				
Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp	Asn	Ser
145					150					155					160
Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu	Gln	Ser
				165					170					175	
Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser	Ser	Ser
		180						185					190		
Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro	Ser	Asn
		195					200					205			
Thr	Lys	Val	Asp	Lys	Arg	Val	Glu	Pro	Lys	Ser	Cys	Asp	Lys	Thr	His
	210					215					220				
Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Ala	Ala	Gly	Gly	Pro	Ser	Val
225					230					235					240
Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr
				245					250					255	
Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu
			260					265					270		
Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys

		275					280					285				
Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	
	290					295					300					
Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	
305					310					315					320	
Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	
				325					330					335		
Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	
			340					345					350			
Pro	Ser	Arg	Glu	Glu	Met	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	
		355					360					365				
Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	
	370					375					380					
Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	
385					390					395					400	
Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	
				405					410					415		
Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	
			420					425					430			
His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly			
		435					440					445				

<210> 15
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 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Cadena liviana - Clon I

<400> 15

Glu	Ile	Val	Leu	Thr	Gln	Ser	Pro	Ala	Thr	Leu	Ser	Leu	Ser	Pro	Gly	
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Glu	Arg	Ala	Thr	Leu	Ser	Cys	Arg	Ala	Ser	Gln	Ser	Ile	Gly	Asp	Tyr	
		20						25					30			
Leu	His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala	Pro	Arg	Leu	Leu	Ile	
		35					40					45				
Lys	Tyr	Ala	Ser	Gln	Ser	Ile	Ser	Gly	Ile	Pro	Ala	Arg	Phe	Ser	Gly	
	50					55					60					
Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Thr	Ser	Leu	Glu	Pro	
65					70					75					80	
Glu	Asp	Phe	Ala	Val	Tyr	Tyr	Cys	Gln	Gln	Gly	Tyr	Ser	Phe	Pro	Tyr	
				85					90					95		
Thr	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Glu	Ile	Lys	Arg	Thr	Val	Ala	Ala	
		100						105					110			
Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu	Gln	Leu	Lys	Ser	Gly	
		115					120					125				
Thr	Ala	Ser	Val	Val	Cys	Leu	Leu	Asn	Asn	Phe	Tyr	Pro	Arg	Glu	Ala	
	130					135					140					
Lys	Val	Gln	Trp	Lys	Val	Asp	Asn	Ala	Leu	Gln	Ser	Gly	Asn	Ser	Gln	
145					150					155					160	
Glu	Ser	Val	Thr	Glu	Gln	Asp	Ser	Lys	Asp	Ser	Thr	Tyr	Ser	Leu	Ser	
				165					170						175	

Ser	Thr	Leu	Thr	Leu	Ser	Lys	Ala	Asp	Tyr	Glu	Lys	His	Lys	Val	Tyr
			180					185					190		
Ala	Cys	Glu	Val	Thr	His	Gln	Gly	Leu	Ser	Ser	Pro	Val	Thr	Lys	Ser
		195					200					205			
Phe	Asn	Arg	Gly	Glu	Cys										
	210														

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 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Cadena pesada - Clon II

<400> 16

Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Pro	Gly	Gly
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Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Pro	Phe	Ser	Ser	Tyr
		20						25				30			
Tyr	Met	Ser	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val
		35				40						45			
Ser	Thr	Ile	Ile	Lys	Ser	Gly	Gly	Tyr	Ala	Tyr	Tyr	Pro	Asp	Ser	Val
	50				55						60				
Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Leu	Tyr
65				70					75					80	
Leu	Gln	Met	Ser	Ser	Leu	Arg	Ala	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
			85					90						95	
Val	Arg	Gly	Gly	Gln	Gly	Ala	Met	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Thr
		100						105					110		
Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu
	115						120					125			
Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu	Gly	Cys
	130					135					140				
Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp	Asn	Ser
145				150						155				160	
Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu	Gln	Ser
			165					170						175	
Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser	Ser	Ser
		180						185					190		
Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro	Ser	Asn
	195					200						205			
Thr	Lys	Val	Asp	Lys	Arg	Val	Glu	Pro	Lys	Ser	Cys	Asp	Lys	Thr	His
	210				215						220				
Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Ala	Ala	Gly	Gly	Pro	Ser	Val
225				230						235				240	
Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr
			245					250						255	
Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu
		260						265					270		
Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys
	275					280						285			
Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser

290		295		300											
Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys
305					310					315					320
Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile
				325					330						335
Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro
			340					345					350		
Pro	Ser	Arg	Glu	Glu	Met	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu
		355					360					365			
Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn
	370					375					380				
Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser
385					390					395					400
Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg
			405					410						415	
Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu
			420				425					430			
His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly		
	435					440					445				

<210> 17
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 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Cadena pesada - Clon III

<400> 17
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Leu Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30
Tyr Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Thr Ile Ile Lys Ser Gly Gly Tyr Ala Tyr Tyr Pro Asp Ser Val
50 55 60
Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Val Lys Gly Gly Gln Gly Ala Met Asp Tyr Trp Gly Gln Gly Thr Thr
100 105 110
Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
115 120 125
Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
130 135 140
Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
145 150 155 160
Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
165 170 175
Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
180 185 190

Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro	Ser	Asn	
	195						200					205				
Thr	Lys	Val	Asp	Lys	Arg	Val	Glu	Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	
	210					215					220					
Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Ala	Ala	Gly	Gly	Pro	Ser	Val	
225					230				235						240	
Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	
			245					250						255		
Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu	
			260					265					270			
Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	
		275					280					285				
Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	
	290					295					300					
Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	
305					310					315					320	
Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	
			325					330						335		
Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	
		340						345					350			
Pro	Ser	Arg	Glu	Glu	Met	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	
		355					360					365				
Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	
	370					375					380					
Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	
385					390					395					400	
Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	
			405					410						415		
Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	
			420					425					430			
His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly			
		435					440					445				

<210> 18
 <211> 214
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Cadena liviana - Clon III

<400> 18

Glu	Ile	Val	Leu	Thr	Gln	Ser	Pro	Ala	Thr	Leu	Ser	Leu	Ser	Pro	Gly	
1			5						10					15		
Glu	Arg	Ala	Thr	Leu	Ser	Cys	Arg	Ala	Ser	Gln	Ser	Ile	Gly	Asp	Tyr	
		20						25					30			
Leu	His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala	Pro	Arg	Leu	Leu	Ile	
		35				40						45				
Tyr	Tyr	Ala	Ser	Gln	Ser	Ile	Ser	Gly	Ile	Pro	Ala	Arg	Phe	Ser	Gly	
	50					55					60					
Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Glu	Pro	
65					70					75				80		
Glu	Asp	Phe	Ala	Val	Tyr	Tyr	Cys	Gln	Gln	Gly	Tyr	Ser	Phe	Pro	Tyr	

				85					90					95			
Thr	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Glu	Ile	Lys	Arg	Thr	Val	Ala	Ala		
			100					105					110				
Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu	Gln	Leu	Lys	Ser	Gly		
		115					120					125					
Thr	Ala	Ser	Val	Val	Cys	Leu	Leu	Asn	Asn	Phe	Tyr	Pro	Arg	Glu	Ala		
	130					135				140							
Lys	Val	Gln	Trp	Lys	Val	Asp	Asn	Ala	Leu	Gln	Ser	Gly	Asn	Ser	Gln		
145					150					155					160		
Glu	Ser	Val	Thr	Glu	Gln	Asp	Ser	Lys	Asp	Ser	Thr	Tyr	Ser	Leu	Ser		
			165					170						175			
Ser	Thr	Leu	Thr	Leu	Ser	Lys	Ala	Asp	Tyr	Glu	Lys	His	Lys	Val	Tyr		
		180					185						190				
Ala	Cys	Glu	Val	Thr	His	Gln	Gly	Leu	Ser	Ser	Pro	Val	Thr	Lys	Ser		
	195					200						205					
Phe	Asn	Arg	Gly	Glu	Cys												
	210																

<210> 19
 <211> 446
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Cadena pesada- Clon IV

<400> 19

Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Leu	Gln	Leu	Gly	Gly		
1			5					10					15				
Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Thr	Phe	Ser	Ser	Tyr		
		20					25					30					
Tyr	Met	Ser	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val		
	35					40					45						
Ser	Thr	Ile	Ile	Lys	Ser	Gly	Gly	Tyr	Ala	Tyr	Tyr	Pro	Asp	Ser	Val		
	50			55				60									
Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Leu	Asn		
65				70				75						80			
Leu	Gln	Met	Asn	Ser	Leu	Arg	Ala	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys		
			85					90					95				
Val	Lys	Gly	Gly	Gln	Gly	Ala	Met	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Thr		
	100						105					110					
Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu		
	115					120					125						
Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu	Gly	Cys		
	130				135					140							
Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp	Asn	Ser		
145				150				155						160			
Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu	Gln	Ser		
			165					170					175				
Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser	Ser	Ser		
	180						185					190					
Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro	Ser	Asn		
	195					200					205						

Thr	Lys	Val	Asp	Lys	Arg	Val	Glu	Pro	Lys	Ser	Cys	Asp	Lys	Thr	His
210						215					220				
Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Ala	Ala	Gly	Gly	Pro	Ser	Val
225						230					235				240
Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr
					245					250				255	
Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu
			260							265				270	
Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys
		275								280				285	
Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser
		290								295				300	
Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys
305						310					315				320
Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile
					325					330					335
Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro
			340							345				350	
Pro	Ser	Arg	Glu	Glu	Met	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu
			355							360				365	
Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn
		370								375				380	
Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser
385						390					395				400
Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg
					405					410					415
Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu
			420							425				430	
His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly		
		435						440					445		

<210> 20
 <211> 214
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Cadena liviana - Clon IV

<400> 20

Glu	Ile	Val	Leu	Thr	Gln	Ser	Pro	Ala	Thr	Leu	Ser	Leu	Ser	Pro	Gly
1				5					10					15	
Glu	Arg	Ala	Thr	Leu	Ser	Cys	Arg	Ala	Ser	Gln	Ser	Ile	Gly	Asp	Tyr
			20					25					30		
Leu	His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala	Pro	Arg	Leu	Leu	Ile
		35					40					45			
Lys	Tyr	Ala	Ser	Gln	Ser	Ile	Ser	Gly	Ile	Pro	Ala	Arg	Phe	Ser	Gly
	50					55					60				
Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Glu	Pro
65					70					75				80	
Glu	Asp	Phe	Ala	Val	Tyr	Tyr	Cys	Gln	Gln	Gly	Tyr	Ser	Phe	Pro	Tyr
				85					90					95	
Thr	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Glu	Ile	Lys	Arg	Thr	Val	Ala	Ala

			100					105				110			
Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu	Gln	Leu	Lys	Ser	Gly
		115					120					125			
Thr	Ala	Ser	Val	Val	Cys	Leu	Leu	Asn	Asn	Phe	Tyr	Pro	Arg	Glu	Ala
	130					135					140				
Lys	Val	Gln	Trp	Lys	Val	Asp	Asn	Ala	Leu	Gln	Ser	Gly	Asn	Ser	Gln
145					150					155					160
Glu	Ser	Val	Thr	Glu	Gln	Asp	Ser	Lys	Asp	Ser	Thr	Tyr	Ser	Leu	Ser
			165						170					175	
Ser	Thr	Leu	Thr	Leu	Ser	Lys	Ala	Asp	Tyr	Glu	Lys	His	Lys	Val	Tyr
		180					185						190		
Ala	Cys	Glu	Val	Thr	His	Gln	Gly	Leu	Ser	Ser	Pro	Val	Thr	Lys	Ser
	195						200					205			
Phe	Asn	Arg	Gly	Glu	Cys										
	210														

<210> 21
 <211> 13
 <212> PRT
 <213> Secuencia artificial

<220>
 <223> Epítopo

<400> 21
 Asp Ser Thr Lys Asp Leu Pro Asp Asp Val Ile Thr Phe
 1 5 10

<210> 22
 <211> 751
 <212> PRT
 <213> Homo sapiens

<400> 22
 Asn Tyr Gln Asn Gly Lys Asn Asn Val Pro Arg Leu Lys Leu Ser Tyr
 1 5 10 15
 Lys Glu Met Leu Glu Ser Asn Asn Val Ile Thr Phe Asn Gly Leu Ala
 20 25 30
 Asn Ser Ser Ser Tyr His Thr Phe Leu Leu Asp Glu Glu Arg Ser Arg
 35 40 45
 Leu Tyr Val Gly Ala Lys Asp His Ile Phe Ser Phe Asp Leu Val Asn
 50 55 60
 Ile Lys Asp Phe Gln Lys Ile Val Trp Pro Val Ser Tyr Thr Arg Arg
 65 70 75 80
 Asp Glu Cys Lys Trp Ala Gly Lys Asp Ile Leu Lys Glu Cys Ala Asn
 85 90 95
 Phe Ile Lys Val Leu Lys Ala Tyr Asn Gln Thr His Leu Tyr Ala Cys
 100 105 110
 Gly Thr Gly Ala Phe His Pro Ile Cys Thr Tyr Ile Glu Ile Gly His
 115 120 125
 His Pro Glu Asp Asn Ile Phe Lys Leu Glu Asn Ser His Phe Glu Asn
 130 135 140

Gly	Arg	Gly	Lys	Ser	Pro	Tyr	Asp	Pro	Lys	Leu	Leu	Thr	Ala	Ser	Leu
145					150					155					160
Leu	Ile	Asp	Gly	Glu	Leu	Tyr	Ser	Gly	Thr	Ala	Ala	Asp	Phe	Met	Gly
			165						170					175	
Arg	Asp	Phe	Ala	Ile	Phe	Arg	Thr	Leu	Gly	His	His	His	Pro	Ile	Arg
		180						185					190		
Thr	Glu	Gln	His	Asp	Ser	Arg	Trp	Leu	Asn	Asp	Pro	Lys	Phe	Ile	Ser
		195					200					205			
Ala	His	Leu	Ile	Ser	Glu	Ser	Asp	Asn	Pro	Glu	Asp	Asp	Lys	Val	Tyr
	210					215					220				
Phe	Phe	Phe	Arg	Glu	Asn	Ala	Ile	Asp	Gly	Glu	His	Ser	Gly	Lys	Ala
225					230					235					240
Thr	His	Ala	Arg	Ile	Gly	Gln	Ile	Cys	Lys	Asn	Asp	Phe	Gly	Gly	His
				245					250					255	
Arg	Ser	Leu	Val	Asn	Lys	Trp	Thr	Thr	Phe	Leu	Lys	Ala	Arg	Leu	Ile
			260					265					270		
Cys	Ser	Val	Pro	Gly	Pro	Asn	Gly	Ile	Asp	Thr	His	Phe	Asp	Glu	Leu
		275					280					285			
Gln	Asp	Val	Phe	Leu	Met	Asn	Phe	Lys	Asp	Pro	Lys	Asn	Pro	Val	Val
	290					295					300				
Tyr	Gly	Val	Phe	Thr	Thr	Ser	Ser	Asn	Ile	Phe	Lys	Gly	Ser	Ala	Val
305					310					315					320
Cys	Met	Tyr	Ser	Met	Ser	Asp	Val	Arg	Arg	Val	Phe	Leu	Gly	Pro	Tyr
				325					330					335	
Ala	His	Arg	Asp	Gly	Pro	Asn	Tyr	Gln	Trp	Val	Pro	Tyr	Gln	Gly	Arg
			340					345					350		
Val	Pro	Tyr	Pro	Arg	Pro	Gly	Thr	Cys	Pro	Ser	Lys	Thr	Phe	Gly	Gly
		355					360					365			
Phe	Asp	Ser	Thr	Lys	Asp	Leu	Pro	Asp	Asp	Val	Ile	Thr	Phe	Ala	Arg
	370					375					380				
Ser	His	Pro	Ala	Met	Tyr	Asn	Pro	Val	Phe	Pro	Met	Asn	Asn	Arg	Pro
385					390					395					400
Ile	Val	Ile	Lys	Thr	Asp	Val	Asn	Tyr	Gln	Phe	Thr	Gln	Ile	Val	Val
				405					410					415	
Asp	Arg	Val	Asp	Ala	Glu	Asp	Gly	Gln	Tyr	Asp	Val	Met	Phe	Ile	Gly
			420					425					430		
Thr	Asp	Val	Gly	Thr	Val	Leu	Lys	Val	Val	Ser	Ile	Pro	Lys	Glu	Thr
		435					440					445			
Trp	Tyr	Asp	Leu	Glu	Glu	Val	Leu	Leu	Glu	Glu	Met	Thr	Val	Phe	Arg
	450					455					460				
Glu	Pro	Thr	Ala	Ile	Ser	Ala	Met	Glu	Leu	Ser	Thr	Lys	Gln	Gln	Gln
465					470					475					480
Leu	Tyr	Ile	Gly	Ser	Thr	Ala	Gly	Val	Ala	Gln	Leu	Pro	Leu	His	Arg
				485					490					495	
Cys	Asp	Ile	Tyr	Gly	Lys	Ala	Cys	Ala	Glu	Cys	Cys	Leu	Ala	Arg	Asp
			500					505					510		
Pro	Tyr	Cys	Ala	Trp	Asp	Gly	Ser	Ala	Cys	Ser	Arg	Tyr	Phe	Pro	Thr
		515					520					525			
Ala	Lys	Arg	Arg	Thr	Arg	Arg	Gln	Asp	Ile	Arg	Asn	Gly	Asp	Pro	Leu
	530					535					540				
Thr	His	Cys	Ser	Asp	Leu	His	His	Asp	Asn	His	His	Gly	His	Ser	Pro
545					550					555					560
Glu	Glu	Arg	Ile	Ile	Tyr	Gly	Val	Glu	Asn	Ser	Ser	Thr	Phe	Leu	Glu
				565					570					575	

Cys	Ser	Pro	Lys	Ser	Gln	Arg	Ala	Leu	Val	Tyr	Trp	Gln	Phe	Gln	Arg
			580					585					590		
Arg	Asn	Glu	Glu	Arg	Lys	Glu	Glu	Ile	Arg	Val	Asp	Asp	His	Ile	Ile
		595				600					605				
Arg	Thr	Asp	Gln	Gly	Leu	Leu	Leu	Arg	Ser	Leu	Gln	Gln	Lys	Asp	Ser
	610				615						620				
Gly	Asn	Tyr	Leu	Cys	His	Ala	Val	Glu	His	Gly	Phe	Ile	Gln	Thr	Leu
625					630					635					640
Leu	Lys	Val	Thr	Leu	Glu	Val	Ile	Asp	Thr	Glu	His	Leu	Glu	Glu	Leu
			645					650					655		
Leu	His	Lys	Asp	Asp	Asp	Gly	Asp	Gly	Ser	Lys	Thr	Lys	Glu	Met	Ser
			660					665					670		
Asn	Ser	Met	Thr	Pro	Ser	Gln	Lys	Val	Trp	Tyr	Arg	Asp	Phe	Met	Gln
		675					680					685			
Leu	Ile	Asn	His	Pro	Asn	Leu	Asn	Thr	Met	Asp	Glu	Phe	Cys	Glu	Gln
	690					695					700				
Val	Trp	Lys	Arg	Asp	Arg	Lys	Gln	Arg	Arg	Gln	Arg	Pro	Gly	His	Thr
705					710					715					720
Pro	Gly	Asn	Ser	Asn	Lys	Trp	Lys	His	Leu	Gln	Glu	Asn	Lys	Lys	Gly
				725				730					735		
Arg	Asn	Arg	Arg	Thr	His	Glu	Phe	Glu	Arg	Ala	Pro	Arg	Ser	Val	
			740					745					750		