

INFORME DE BÚSQUEDA DE PATENTES PARA EL Radicado N° 13-291212-00004-0000

CRITERIOS PARA LA BÚSQUEDA (anexar pantallazo o reporte en PDF, junto con los boleanos utilizados)

Palabras clave utilizadas	Antibodies anti beta-amyloid protein, chimeric or humanized antibodies, human β -amyloid peptide, treatment of Alzheimer's disease, (A β) peptides
CLASIFICACIONES INTERNACIONALES UTILIZADAS PARA LA BÚSQUEDA	A61K 39/395, G01N 33/53, G01N 33/567.

BASES DE DATOS CONSULTADAS.

Patentscope	Google/patents		
NCBI	EPOQUENET		
Espacenet	Sciencedirect		
Lens			

INFORMES DE EXÁMENES REALIZADOS EN OTRAS OFICINAS (documentos patentes, literatura no patente etc...)

Oficina	Fecha del examen o de reporte de búsqueda de documentos	Anterioridades encontradas para el examen o reportados en el examen de búsqueda(relacionarlos de todos)	Reiv. afectadas	RELEVANCIA (requisito que afecta)	FUERON TENIDOS EN CUENTA PARA EL EXAMEN EN LA OFICINA COLOMBIANA	
					SI	NO
EPO INTERNATIONAL SEARCH REPORT	14/05/2008	BARD <i>et al.</i> , 2000, "Peripherally administered antibodies against amyloid bipeptide enter the central nervous system and reduce pathology in a mouse model of Alzheimer disease", Nature Med.; 6:916-919	1 - 152	Novedad/ Nivel inventivo		X
		LIU RUITIAN <i>et al.</i> , 2004, "Single chain variable fragments against beta-amyloid (Abeta) can inhibit Abeta aggregation and prevent Abeta-induced neurotoxicity", Biochem; 43(22):6959-6967.	1 - 152	Novedad/ Nivel inventivo		X
		SOLOMON <i>et al.</i> , 1996, "Monoclonal antibodies inhibit in vitro fibrillar aggregation of the Alzheimer beta-amyloid peptide", Proc Natl Acad Sci USA;93:452-455	1 - 152	Novedad/ Nivel inventivo		X
		WO2006055178	1 - 152	Nivel inventivo		X
		WO02096937	1 - 152	Nivel inventivo		X
		WO03070760	1 - 152	Nivel inventivo		X
		WO0072880	1 - 152	Nivel inventivo		X
		WO0162801	1 - 152	Nivel inventivo		X
		WO2006066171	1 - 152	Nivel inventivo		X

US20060039906

WO2005123775

WO2007108756

WO0203911

TW201038590

ZA200805805

US2006079447

Padlan EA <i>et al.</i> 1989. Structure of an antibody-antigen complex: crystal structure of the HyHEL-10 Fab-lysozyme complex. Proc Natl Acad Sci USA; 86:5938-5942					
US7195761					
US2007110750					
WO0246237					
WO2006081171					
BÚSQUEDA DE SECUENCIAS					
Número de depósito / patente y N° de secuencia					
% de identidad					
SEQ ID NO (de la solicitud)	NCBI	The Lens	EMBL-EBI	DDJB	Genome Quest
SEC ID NO: 2		US20060039906 SEC ID NO: 5 81% de identidad			
SEC ID NO: 3		US20060039906 SEC ID NO: 6 100% de identidad			
SEC ID NO: 4		US20060039906 SEC ID NO: 1 75% de identidad			
RVSNRFS		US20060039906 SEC ID NO: 2 100% de identidad			
SEC ID NO: 6		US20060039906 SEC ID NO: 3 100% de identidad			

BÚSQUEDA DE SECUENCIAS

SEQ ID NO: 12

Sequences producing significant alignments:

Select: All None Selected:0

Alignments Download GenPept Graphics Distance tree of results Multiple alignment						
	Description	Max score	Total score	Query cover	E value	Ident Accession
☐	Sequence 12 from patent US 7892544	230	230	100%	2e-77	100% AED45924.1
☐	unnamed protein product [synthetic construct]	230	230	100%	3e-77	100% CAV32067.1
☐	Sequence 75 from patent US 7892544	231	231	100%	3e-77	100% AED45971.1
☐	Sequence 13 from patent US 7892544	233	233	100%	4e-77	100% AED45925.1
☐	Sequence 63 from patent US 7892544	229	229	100%	7e-77	99% AED45960.1
☐	Sequence 64 from patent US 7892544	229	229	100%	8e-77	99% AED45961.1
☐	Sequence 65 from patent US 7892544	228	228	100%	2e-76	98% AED45962.1
☐	Sequence 66 from patent US 5773218	226	226	100%	8e-76	98% AAC89657.1
☐	Sequence 45 from patent US 8822645	226	226	100%	1e-75	98% AJM97960.1
☐	unnamed protein product [Homo sapiens]	225	225	100%	4e-75	98% CAX20929.1
☐	Sequence 159 from patent US 8822645	227	432	100%	3e-74	98% AJM98074.1
☐	Sequence 157 from patent US 8822645	227	432	100%	3e-74	98% AJM98072.1
☐	Sequence 89 from patent US 7867734	220	220	100%	3e-73	95% AEC31108.1
☐	Sequence 14 from patent US 8333967	219	219	100%	9e-73	96% AGC97689.1

US 7892544 es la misma solicitud

SEQ ID NO: 13

Sequences producing significant alignments:

Select: [All](#) [None](#) Selected:0

Alignments Download GenPept Graphics Distance tree of results Multiple alignment								
Description		Max score	Total score	Query cover	E value	Ident	Accession	
☐	Sequence 13 from patent US 7892544	451	451	100%	7e-161	100%	AED45925.1	
☐	Sequence 16 from patent US 8859739	439	439	100%	3e-156	97%	AJN37322.1	
☐	unnamed protein product [synthetic construct]	439	439	100%	7e-156	97%	CEF39361.1	
☐	Sequence 38 from patent US 7910100	439	439	100%	8e-156	98%	AED65650.1	
☐	Sequence 11 from patent US 7195761	437	437	100%	2e-155	96%	ABP30347.1	
☐	Sequence 91 from patent US 8449882	436	436	100%	2e-154	96%	AGN38969.1	
☐	Sequence 68 from patent US 8048422	434	434	100%	2e-154	97%	AER79150.1	
☐	Sequence 275 from patent US 8617554	434	434	100%	4e-154	95%	AHH56464.1	
☐	Sequence 165 from patent US 8962804	434	434	100%	4e-154	96%	AKX12218.1	
☐	Sequence 40 from patent US 8227576	434	434	100%	4e-154	96%	AFQ71324.1	
☐	Sequence 99 from patent US 8449882	434	434	100%	7e-154	95%	AGN38973.1	
☐	Sequence 161 from patent US 7780963	433	433	100%	8e-154	95%	ADS27101.1	
☐	Sequence 101 from patent US 8742088	433	433	100%	2e-153	95%	AJM02401.1	
☐	Sequence 159 from patent US 7780963	432	432	100%	2e-153	95%	ADS27099.1	
☐	Sequence 29 from patent US 8617829	432	432	100%	3e-153	96%	AHH57195.1	
☐	Sequence 66 from patent US 8048422	432	432	100%	3e-153	96%	AER79148.1	

SEQ ID NO: 15

Sequences producing significant alignments:

Select: [All](#) [None](#) Selected:0

Alignments Download GenPept Graphics Distance tree of results Multiple alignment								
Description		Max score	Total score	Query cover	E value	Ident	Accession	
☐	Sequence 15 from patent US 7892544	228	228	100%	3e-76	100%	AED45927.1	
☐	Sequence 71 from patent US 7892544	226	226	100%	2e-75	99%	AED45968.1	
☐	Sequence 70 from patent US 7892544	224	224	100%	5e-75	99%	AED45967.1	
☐	Sequence 44 from patent US 8822645	224	224	100%	7e-75	98%	AJM97959.1	
☐	unnamed protein product [Homo sapiens]	224	224	100%	2e-74	98%	CAX20928.1	
☐	Sequence 69 from patent US 7892544	223	223	100%	3e-74	98%	AED45966.1	
☐	unnamed protein product [Homo sapiens]	221	221	100%	1e-73	97%	CAX20927.1	
☐	Sequence 158 from patent US 8822645	224	339	100%	2e-73	98%	AJM98073.1	
☐	Sequence 156 from patent US 8822645	224	339	100%	2e-73	98%	AJM98071.1	
☐	Sequence 16 from patent US 7892544	230	230	100%	4e-73	100%	AED45928.1	
☐	Sequence 10 from patent US 7195761	213	213	100%	2e-70	93%	ABP30346.1	
☐	unnamed protein product [synthetic construct]	211	211	100%	1e-69	90%	CAV32064.1	
☐	Sequence 8 from patent US 7772375	210	210	100%	2e-69	90%	ADS24569.1	
☐	Sequence 61 from patent US 7892544	211	211	100%	3e-69	90%	AED45958.1	
☐	Sequence 15 from patent US 7771722	209	209	100%	6e-69	91%	ADS20736.1	
☐	Sequence 11 from patent US 8609820	207	207	100%	4e-68	91%	AJQ52707.1	

SEQ ID NO: 16

Select: [All](#) [None](#) Selected:0

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BÚSQUEDA EN EPOQUENET

WO2009065054 EP2207568 US2013351917 JP2014223074 TN2010000128 SG2014011185
EP2207568 US2013351917 JP2014223074 TN2010000128 SG2014011185

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PN - WO2009065054 A2 20090522

PNFP - WO2009065054 A3 20091230

TI - (A2 A3)

ANTIBODIES SPECIFIC FOR THE PROTOFIBRIL FORM OF BETA-AMYLOID PROTEIN

TIFR - (A2 A3)

ANTICORPS SPÉCIFIQUES DE LA FORME DE PROTOFIBRILLE DE PROTÉINE BÉTA-AMYLÓIDE

AB - (A2 A3)

Isolated antibodies have been characterized which show specific affinity to a repeating conformational epitope of a protofibril form of the human ss-amyloid peptide as compare to low molecular weight forms of ss-amyloid peptide. These isolated antibodies and related pharmaceutically effective compositions may be useful in the therapeutic and/or prophylactic treatment of Alzheimer's disease by effectively blocking the ability of the protofibril form of ss-amyloid peptide to form fibril forms linked with complications associated with Alzheimer's disease. The isolated antibodies of the present invention are also useful in various diagnostic assays and associated kits.

ABFR - (A2 A3)

L'invention concerne des anticorps isolés caractérisés qui présentent une affinité spécifique pour un épitope conformationnel de répétition d'une forme de protofibrille du peptide b-amyloïde humain par comparaison à des formes à bas poids moléculaire de peptide b-amyloïde. Ces anticorps isolés et compositions pharmaceutiquement efficaces apparentées peuvent être utiles pour le traitement thérapeutique et/ou préventif de la maladie d'Alzheimer en bloquant efficacement la capacité de la forme de protofibrille du peptide b-amyloïde de produire des formes de fibrille liées aux complications associées à la maladie d'Alzheimer. Les anticorps isolés de la présente invention sont également utiles pour divers essais de diagnostic et kits associés.

CCI - C07K16/18; G01N33/6896

CCA - A61K2039/505; C07K2317/34; G01N2333/4709

PA - (A2 A3)

UNIV ROCKEFELLER [US]; RAVETCH JEFFREY [US]; FUKUYAMA HIDEHIRO [FR]

WO2009065054 EP2207568 US2013351917 JP2014223074 TN2010000128 SG2014011185
EP2207568 US2013351917 JP2014223074 TN2010000128 SG2014011185

Bidi
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BPO
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Trat
BANS
A2
Bib
Abx
Desc
Class
Fig
Sf exp
Annex

Thumb
Style
Media

Fig 1/12

Aβ fibrillogenesis

4.5kDa

Monomer

⇌

15kDa

Dimer

⇌

>100kDa

protofibril
(Aβ oligomer in SDS)

soluble

→

Fibrils

insoluble

FIG. 1

WO2005123775 US2015307601 US2013236452 US2012230912 US2009155246

EP/DOC / EPO

AB - WO2005123775 A1 20051229

TI - ANTIBODIES SPECIFIC FOR SOLUBLE AMYLOID BETA PEPTIDE PROTOfIBRILS AND USES THEREOF

TIFR - ANTICORPS SPECIFIQUES DESTINES A DES PROTOfIBRILLES PEPTIDIQUES AMYLOIDES BETA ET UTILISATIONS ASSOCIEES

AB - The invention pertains to the development of antibodies that specifically bind amyloid beta protein (Abeta) in its protofibril conformation. The invention also comprises methods of using anti-Abeta protofibril antibodies to diagnose or treat Alzheimer's disease, Down's syndrome Lewybody dementia, vascular dementia, and other neurodegenerative disorders. Furthermore, the invention pertains to the use of anti-Abeta protofibril antibodies to screen and identify substances that will modulate protofibril activity or formation in vitro or in vivo. The invention also pertains to methods for synthesising pure Abeta protofibril antigens as well as to a method for stabilising Abeta protofibril antigens as well as to a method for stabilising Abeta protofibrils.

ABFR - L'invention concerne le développement d'anticorps se liant de manière spécifique à la protéine amyloïde bêta (Abêta) dans sa conformation de protofibrille. L'invention concerne également des procédés d'utilisation des anticorps de protofibrilles anti-Abêta, aux fins de diagnostic ou de traitement de la maladie d'Alzheimer, du syndrome de Down, de la démence à corps de Lewy, de la démence vasculaire et d'autres troubles neurodégénératifs. De plus, l'invention concerne l'utilisation des anticorps de protofibrilles anti-Abêta, aux fins de criblage et d'identification de substances modulant l'activité ou la formation de protofibrilles in vitro ou in vivo. L'invention concerne enfin des procédés de synthèse des antigènes purs de protofibrilles d'Abêta, ainsi qu'un procédé de stabilisation de protofibrilles d'Abêta.

CCI - C07K16/18; C07K14/4711

CCA - G01N2800/2821; G01N2800/387

CUA - C07K2317/24

PA - BIOARTIC NEUROSCIENCE AB [SE]; GELLERFORS PAER [SE]; LANNFELT LARS [SE]

IN - GELLERFORS PAER [SE]; LANNFELT LARS [SE]

CT - (A1 int.srep. SE)
WO203911 A2 [Y];
US6054114 A [X];

Fig 1/8

WO 2005/123775

PCT/SE2005/00093

1/8

FIG. 1

A. Monomer wtAβ40

Intensity (AU)

Retention Time (min)

B. Protofibril Aβ42Arc

Intensity (AU)

Retention Time (min)

SUBSTITUTE SHEET (RULE 26)

WO2007108756 EP2325209 US2012076726 HK1120056 RSS1723 HRP201102

EP/DOC / EPO

AB - WO2007108756 A1 20070927

TI - IMPROVED PROTOfIBRIL SELECTIVE ANTIBODIES AND THE USE THEREOF

TIFR - ANTICORPS AMÉLIORÉS SÉLECTIFS DE PROTOfIBRILLES ET LEUR UTILISATION

AB - The present invention pertains to the prevention, treatment and diagnosis of neurodegenerative diseases, in particular Alzheimer's disease, and other similar disease. More specifically to high affinity antibodies selective for amyloid beta protein (Ass) in its protofibril conformation and of IgG class and IgG4 subclass or combinations thereof or mutations thereof, retaining high Fc receptor binding and low C1q binding, effective in clearance of Ass protofibrils and with reduce risk of inflammation.

ABFR - La présente invention concerne la prévention, le traitement et le diagnostic de maladies neurodégénératives, en particulier de la maladie d'Alzheimer, et d'autres maladies similaires. L'invention concerne plus particulièrement des anticorps à haute affinité, sélectifs de la protéine amyloïde bêta (Ass) dans sa conformation de protofibrille, et des anticorps de la classe des IgG et de la sous-classe des IgG4 ou IgG4, ou des combinaisons ou encore des mutations de ces anticorps. Ils conservent une forte liaison avec les récepteurs des fragments Fc et une faible liaison avec le complément (C1q), une efficacité dans la clairance des protofibrilles Ass et présentent un risque réduit d'inflammation.

CCI - C07K16/18; C07K16/465; G01N33/6896

CCA - A61K2039/505; C07K2317/24; C07K2317/565; G01N2333/4709; G01N2800/2814; G01N2800/387

PA - BIOARTIC NEUROSCIENCE AB [SE]; GELLERFORS PAER [SE]; LANNFELT LARS [SE]; SEHLIN DAG [SE]; EKOLM PETERSSON FRIDA [SE]; ENGLUND HILLEVI [SE]

IN - GELLERFORS PAER [SE]; LANNFELT LARS [SE]; SEHLIN DAG [SE]; EKOLM PETERSSON FRIDA [SE]; ENGLUND HILLEVI [SE]

CT - (A1 int.srep. SE)
US2006079447 A1 [XP];
WO2006066233 A1 [XP];
WO2005123775 A1 [A];
XP004625627 A [A];
XP002379307 A [A];
XP002991681 A [A]

Fig 1/45

WO 2007/108756

PCT/SE2007/000292

1/45

Table 1.

Amino acid sequence of variable regions of the heavy chain (VH) and light chain (VL) from six different monoclonal antibodies specific for human wild-type Aβ protofibrils.

Table 2.

Position of the selected CDR regions (1-3) are underlined in VL and VH. The boundaries of the CDR regions (1-3) are shown in Table 2 and Table 4. Antibody 3a-1, also named 1a-1 in the patent application, is an example of a high affinity protofibril specific antibody according to the invention.

< WO0203911 US2002162129 US2007248606 US2008181902 EP2 >

Bibli

All

Oth

EPO

Text

Desc

Clms

Ext

Tral

BNS

A2

Bib

Abs

Desc

Clms

Fig

SRP

Amnd

Thmb

1Pge

Media

EPODOC / EPO

PN - WO0203911 A2 20020117

PNFP - WO0203911 A3 20020411

Text - WO0203911 A8 20020620

Desc - WO0203911 B1 20020523

Clms - (A2 A3 A8 B1)

PREVENTION AND TREATMENT OF ALZHEIMER'S DISEASE

TIFR - (A2 A3 A8 B1)

PREVENTION ET TRAITEMENT DE LA MALADIE D'ALZHEIMER

AB - (A2 A3 A8 B1)

The present invention relates to prevention and treatment of Alzheimer's disease (AD). More specifically, the invention relates to use of a non-wild type protofibril or compound(s) with protofibril forming activity for active immunisation in the purpose of treating or preventing AD. The invention further relates to a peptide, ass-Arc, with high protofibril forming activity as well as several applications thereof, such as antibodies against said peptide for passive immunisation against AD.

ABFR - (A2 A3 A8 B1)

La présente invention concerne la prévention et le traitement de la maladie d'Alzheimer. De manière spécifique, cette invention a trait à l'utilisation d'une protofibrille de type non sauvage ou d'un/de composé(s) présentant une activité de production de protofibrille, destinée à l'immunisation active, en vue de traiter ou de prévenir la maladie d'Alzheimer. La présente invention concerne également un peptide, beta A-Arc, présentant une forte activité de production de protofibrille, ainsi que diverses applications de

< WO0203911 US2002162129 US2007248606 US2008181902 EP2082749 >

Bibli

All

Oth

EPO

Text

Desc

Clms

Ext

Tral

BNS

A2

Bib

Abs

Desc

Clms

Fig

SRP

Amnd

Thmb

1Pge

Media

1Pge

Figure 1

Figure 2

Figure 3

Figure 4

Figure 5

Figure 6

Figure 7

Figure 8

Figure 9

Figure 10

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Figure 1 shows three line graphs (A, B, C) illustrating the absorbance units at 214 nm over time (hours) for different peptide treatments. The y-axis represents Absorbance units at 214 nm, and the x-axis represents Time (hours).

Graph A shows the absorbance units for the control (open circles) and the peptide treatment (filled circles). The control shows a steady increase in absorbance over time, while the peptide treatment shows a decrease in absorbance over time.

Graph B shows the absorbance units for the control (open circles) and the peptide treatment (filled circles). The control shows a steady increase in absorbance over time, while the peptide treatment shows a decrease in absorbance over time.

Graph C shows the absorbance units for the control (open circles) and the peptide treatment (filled circles). The control shows a steady increase in absorbance over time, while the peptide treatment shows a decrease in absorbance over time.

Legend:

- Proteinase A (filled circles)
- Proteinase A (open circles)
- Proteinase A (filled circles)