

Title (en)  
POLYPEPTIDES WITH ENHANCED ANTI-INFLAMMATORY AND DECREASED CYTOTOXIC PROPERTIES AND RELATING METHODS

Title (de)  
POLYPEPTIDE MIT VERBESSERTEN ENTZÜNDUNGSHEMMENDEN UND VERMINDERTEN ZYTOTOXISCHEN EIGENSCHAFTEN UND DAMIT IM ZUSAMMENHANG STEHENDE VERFAHREN

Title (fr)  
POLYPEPTIDES AYANT DES PROPRIETES ANTIINFLAMMATOIRES ACCRUES ET CYTOTOXIQUES REDUITES ET PROCEDES ASSOCIES

Publication  
**EP 2091969 A4 20100512 (EN)**

Application  
**EP 07812601 A 20070703**

Priority  
• US 2007072771 W 20070703  
• US 2006041791 W 20061027  
• US 2007008396 W 20070403

Abstract (en)  
[origin: WO2008057634A2] The invention provides a polypeptide containing at least one IgG Fc region, wherein said at least one IgG Fc region is glycosylated with at least one galactose moiety connected to a respective terminal sialic acid moiety by a 2, 6 linkage, and wherein said polypeptide having a higher anti-inflammatory activity as compared to an unpurified antibody.

IPC 8 full level  
**C07K 16/00** (2006.01); **A61K 39/395** (2006.01); **C07K 1/00** (2006.01); **C12P 21/08** (2006.01)

CPC (source: EP)  
**C07K 16/00** (2013.01); **A61K 2039/505** (2013.01); **C07K 2317/41** (2013.01); **C07K 2317/52** (2013.01); **C07K 2317/71** (2013.01)

Citation (search report)

- [X] WO 0063403 A2 20001026 - INTROGENE BV [NL], et al
- [X] WO 9639488 A1 19961212 - GENENTECH INC [US], et al
- [X] WO 2005063808 A1 20050714 - MERCK PATENT GMBH [DE], et al
- [X] WO 2004058944 A2 20040715 - BRISTOL MYERS SQUIBB CO [US], et al
- [XP] WO 2007005786 A2 20070111 - CENTOCOR INC [US], et al
- [X] KANEKO Y ET AL: "ANTI-INFLAMMATORY ACTIVITY OF IMMUNOGLOBULIN G RESULTING FROM FC SIALYLATION", SCIENCE, AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, WASHINGTON, DC; US, vol. 313, no. 5787, 1 August 2006 (2006-08-01), pages 670 - 673, XP008076047, ISSN: 0036-8075
- [X] JASSAL R ET AL: "Sialylation of human IgG-Fc carbohydrate by transfected rat alpha2,6-sialyltransferase.", BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS 17 AUG 2001, vol. 286, no. 2, 17 August 2001 (2001-08-17), pages 243 - 249, XP002574380, ISSN: 0006-291X
- [XP] SCALLON ET AL: "Higher levels of sialylated Fc glycans in immunoglobulin G molecules can adversely impact functionality", MOLECULAR IMMUNOLOGY, PERGAMON, GB, vol. 44, no. 7, November 2006 (2006-11-01), pages 1524 - 1534, XP005792683, ISSN: 0161-5890
- [X] RAJU T SHANTHA ET AL: "Glycoengineering of therapeutic glycoproteins: In vitro galactosylation and sialylation of glycoproteins with terminal N-acetylglucosamine and galactose residues", BIOCHEMISTRY, AMERICAN CHEMICAL SOCIETY, EASTON, PA.; US, vol. 40, no. 30, 31 July 2001 (2001-07-31), pages 8868 - 8876, XP002461128, ISSN: 0006-2960
- [A] DALZIEL MARTIN ET AL: "Lectin analysis of human immunoglobulin G N-glycan sialylation", GLYCOCONJUGATE JOURNAL, vol. 16, no. 12, December 1999 (1999-12-01), pages 801 - 807, XP002575135, ISSN: 0282-0080
- [AD] WANG W-C ET AL: "THE IMMOBILIZED LEUKOAGGLUTININ FROM THE SEEDS OF MAACKIA-AMURENSIS BINDS WITH HIGH AFFINITY TO COMPLEX-TYPE ASN-LINKED OLIGOSACCHARIDES CONTAINING TERMINAL SIALIC ACID-LINKED ALPHA-2 3 TO PENULTIMATE GALACTOSE RESIDUES", JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 263, no. 10, 1988, pages 4576 - 4585, XP002575136, ISSN: 0021-9258
- [XP] NIMMERJAHN FALK ET AL: "The antiinflammatory activity of IgG: the intravenous IgG paradox", JOURNAL OF EXPERIMENTAL MEDICINE, vol. 204, no. 1, January 2007 (2007-01-01), pages 11 - 15, XP002575137, ISSN: 0022-1007
- See references of WO 2008057634A2

Citation (examination)

- KANEKO Y ET AL: "ANTI-INFLAMMATORY ACTIVITY OF IMMUNOGLOBULIN G RESULTING FROM FC SIALYLATION", SCIENCE, AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, WASHINGTON, DC; US, vol. 313, no. 5787, 1 August 2006 (2006-08-01), pages 670 - 673, XP008076047, ISSN: 0036-8075, DOI: 10.1126/SCIENCE.1129594
- WANG W-C ET AL: "THE IMMOBILIZED LEUKOAGGLUTININ FROM THE SEEDS OF MAACKIA-AMURENSIS BINDS WITH HIGH AFFINITY TO COMPLEX-TYPE ASN-LINKED OLIGOSACCHARIDES CONTAINING TERMINAL SIALIC ACID-LINKED .ALPHA.-2 3 TO PENULTIMATE GALACTOSE RESIDUES", JOURNAL OF BIOLOGICAL CHEMISTRY, AMERICAN SOCIETY FOR BIOCHEMISTRY AND MOLECULAR BIOLOGY, US, vol. 263, no. 10, 5 April 1988 (1988-04-05), pages 4576 - 4585, XP002575136, ISSN: 0021-9258

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**WO 2008057634 A2 20080515; WO 2008057634 A3 20081204;** AU 2007317755 A1 20080515; EP 2091969 A2 20090826; EP 2091969 A4 20100512

DOCDB simple family (application)  
**US 2007072771 W 20070703;** AU 2007317755 A 20070703; EP 07812601 A 20070703