

Recent patent applications in antibody engineering

Patent number	Description	Assignee	Inventor	Priority application date	Publication date
US20140072528A1	A combination of an immunoconjugate comprising a first antibody engineered to have reduced effector function and an effector moiety and a second antibody engineered to have increased effector function; useful for treating a disease in an individual.	Roche Glycart (Schlieren, Switzerland)	Gerdes C, Klein C, Moessner E, Nicolini VG, Umana P	8/7/2012	3/13/2014
US20140032186A1	A method for constructing a variant set for an antibody of interest comprising identifying positions in the antibody of interest and, for each respective position, one or more substitutions for the respective position, where the positions and the substitutions for each respective position collectively define an antibody sequence space.	DNA Twopointo (Menlo Park, CA, USA), Gustafsson C, Govindarajan S, Minshull JS	Gustafsson C, Govindarajan S, Minshull JS	8/1/2003	1/30/2014
US20120329069A1	A method for designing an antibody comprising identifying a variation-tolerant position in a parent antibody and substituting the amino acid present at the variation-tolerant position to produce an antibody that binds to the antigen and has an amino acid sequence that is different from that of the related monoclonal antibodies.	Epitomics (Burlingame, CA, USA)	Couto FJRD, Hendricks KB, Wallace SE, Yu G-L	11/8/2004	12/27/2012
US7241598B2	A method for preparing single-chain variable fragments encoding an antigen-specific antibody comprising amplifying the variable regions using a frame-shifting PCR and linking the variable regions by an overlap-extensive PCR to obtain single-chain variable fragments.	The Chinese University of Hong Kong (Hong Kong SAR, China)	Cheung WT, Cheng M	6/29/2004	7/10/2007
US20040258682A1	A monoclonal antibody, or a fragment, engineered to contain a glycosylation site in the non-Fc constant heavy or light chain region. Also, an isolated DNA molecule comprising: (i) an antibody heavy chain gene, comprising a sequence in the CH1 region that, when the gene is coexpressed with a gene for an antibody light chain in a cell supporting glycosylation, will produce an antibody glycosylated in the CH1 region; or (ii) an antibody light chain gene, comprising a sequence in the constant K region that, when the gene is coexpressed with a gene for an antibody heavy chain in a cell supporting glycosylation, will produce an antibody glycosylated in the constant K region.	Immunomedics (Morris Plains, NJ, USA)	Leung S, Hansen HJ, Qu Z	3/20/1996	12/23/2004
US20020161201A1	A new single-chain, antigen-binding polypeptide that can be glycosylated, comprising (i) first and second polypeptides, each containing the antigen-binding part of the variable region of an antibody light or heavy chain, connected by (ii) a peptide linker.	Enzon (Piscataway, NJ, USA)	Filpula D, Wang M, Shorr R, Whitlow M, Lee, LS	4/30/1997	10/31/2002

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