Creative Biolabs Updates Its Antibody Humanization Service to Further Accelerate Your Monoclonal Antibody Research

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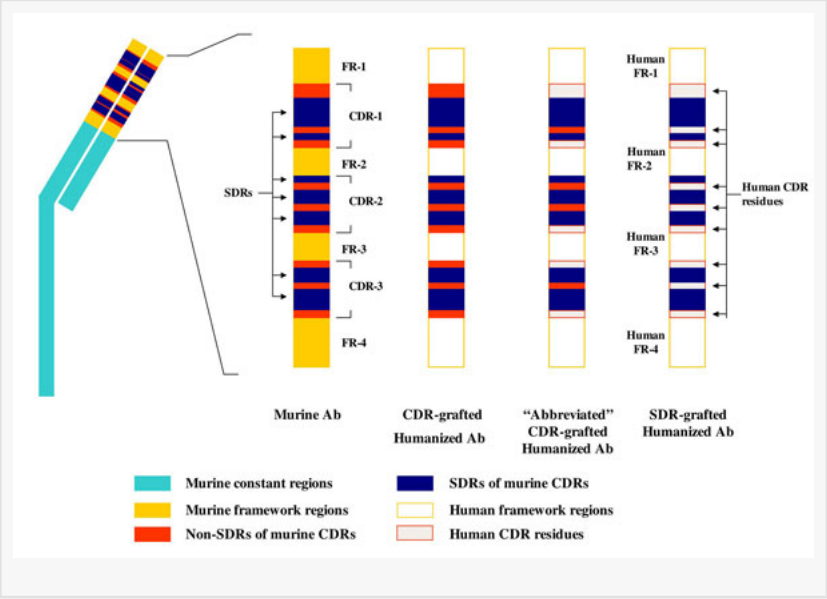

SHIRLEY, NY, USA, August 8, 2015 /EINPresswire.com/ -- Creative Biolabs has recently updated its antibody humanization service to further accelerate clients' monoclonal antibody research requirements.

Humanization plays an important role in reducing the immunogenicity of monoclonal antibodies that are derived from xenogeneic sources and improving their activation of the human immune system. With the rise of the hybridoma technology, a great number of rodent monoclonal antibodies with specificity for antigens of therapeutic interest have been generated. Rodent antibodies are highly immunogenic in humans, which limits their clinical applications, especially when repeated administration is required. More importantly, they are rapidly removed from circulation and may lead to systemic inflammatory effects as well. In order to solve these problems, Creative Biolabs developed three antibody humanization strategies that can preserve the specificity and affinity of the antibody toward the antigen, which helps to eliminate the immunogenicity of the antibody in humans.

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> *Monica Müller, senior scientific officer of Creative Biolabs*

CDR Grafting & SDR Grafting

CDR Grafting & SDR Grafting is featured with randomization of a small set of framework residues utilizing phage display technology and computer modeling. In this platform, six CDR loops comprising the antigen-binding site are grafted into corresponding human framework regions. This approach retains the epitope specificity of the original antibody.

Chain Shuffling

Creative Biolabs also optimized a chain shuffling strategy, an entirely selective humanization strategy based on construction and screening of two chimeric phage display libraries. This approach allows

100% humanization of a mouse antibody. “We would like to propose using our HuScL-2TM Phage Display Naive Human scFv Library with a complexity of 1.42×109 transformants as the backbone of the chimeric libraries and the donor of human VL and VH chains.” said Monica Müller, senior scientific officer of Creative Biolabs.

Humanized IgG library screening

In this method, a mammalian cell surface display library is made to display full-size humanized IgG variants that are to be further selected suing FACS. This method allows the selection of humanized antibodies in a full-size IgG format that keeps or increases the original affinity of the mouse antibody as well as the selection of high affinity humanized antibodies in a dimeric IgG format.

There are two features in the antibody humanization service of Creative Biolabs. First of all, antibody affinity maturation is an integrated step in its humanization procedure, thus there is no need to improve the affinity after humanization. Secondly, except for the common computational and biochemical methods, Creative Biolabs has developed a proprietary in vivo approach to evaluate the immunogenicity of the humanized antibodies in primates. The immunogenicity measured in primates is the closest one that may mimic the true immunogenicity of the humanized antibodies in humans. Learn more about antibody humanization service.

About Creative Biolabs

Creative Biolabs is a professional biotech service provider from the USA. It has been in the field of antibody production and antibody technologies since its establishment. It is aimed to provide the best for scientist and researchers worldwide. Learn more about Creative Biolabs.

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