Efficient Selection of Antibodies Specific to Target Extracellular Proteins

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INVENTION NOVELTY

This invention enables the direct selection of membrane proteins in their native state, thereby facilitating the production of highly specific antibodies.

VALUE PROPOSITION

Generating antibodies against cell surface expressed antigens can be inefficient and time-consuming, requiring the overproduction and/or purification of each extracellular target of interest. In vitro phage display selection methods using large antibody libraries are limited in their ability to distinguish antibodies generated from all proteins on the cell surface (background) from antibodies to the protein of interest. To solve this problem UCSF inventors developed a method to specifically select for phage bound only to the antigen of interest.

Advantages:

• Generates antibodies with high affinity and specificity to extracellular proteins

• Simple, robust and rapid method

TECHNOLOGY DESCRIPTION

The Wells lab at UCSF has developed a method of generating highly specific antibodies to extracellular targets. By combining conventional phage display methods with their novel selection approach, the inventors have overcome previous limitations of antibody generation such as the selection and amplification of non-specific targets. Their methodology is technically simple and can be readily adopted by companies interested in developing antibodies for human therapeutics or preclinical model systems.

APPLICATION

- Method for selecting functional antibodies to extracellular targets
- Method to specifically select for phage bound only to the antigen of interest

LEAD INVENTOR

INVENTORS PROFILE

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OTHER INFORMATION

KEYWORDS

Antibodies, Phage Display

CATEGORIZED AS

- Medical
  - Diagnostics
  - Therapeutics
- Research Tools
  - Antibodies

RELATED CASES

2014-154-0

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	10,040,844	08/07/2018	2014-154

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