Method of Preparing Multivalent Single Chain Antibodies (scFv)

Tech ID: 11289 / UC Case 2006-340-0

ABSTRACT

Construction of Multivalent Antibody scFv Through Cu(I) Catalyzed 1,3-Dipolar Cycloaddition

FULL DESCRIPTION

Single chain fragments (scFv) derived from the small binding domain of parent monoclonal antibodies (MAb) offer pharmacokinetic advantages and target tumor cells more efficiently than MAb. However, methods for producing multivalent scFv have proven to be very challenging. UC Davis researchers have recently developed a novel method to construct divalent scFv through a small linker using 1,3-dipolar cycloaddition chemistry.

APPLICATIONS

This method provides an efficient and controllable way to produce multivalent antibodies for the advancement of scFv against cancer.

FEATURES/BENEFITS

This method surpasses previous methods of production, such as using polyvalent proteins and antibodies, which were limited by low throughput and high cost.

RELATED MATERIALS


PATENT STATUS

<table>
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<tr>
<th>Country</th>
<th>Type</th>
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<td>United States Of America</td>
<td>Issued Patent</td>
<td>8,946,391</td>
<td>02/03/2015</td>
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RELATED TECHNOLOGIES

▶ High-Throughput Screening of Neuraminidase Inhibitors
▶ Synthesis of Immunopotent Alpha Glycolipids via Glycosyl Iodides

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

▶ Novel method to Efficiently Synthesize complex Carbohydrates
▶ Synthesis of Immunopotent Alpha Glycolipids via Glycosyl Iodides
▶ High-Throughput Screening of Neuraminidase Inhibitors
▶ Camellia Sinesis Rapid Growth Platform