

NOVEL ANTIBODIES AGAINST EPHA2 FOR RESEARCH, DIAGNOSIS, AND TREATMENT OF CANCER

Tech ID: 30477 / UC Case 2009-106-0

INVENTION NOVELTY

A novel monoclonal human antibody specific to the cell-surface exposed protein EphA2, which is over-expressed in many forms of cancer and is a validated therapeutic target.

VALUE PROPOSITION

Many forms of cancer, most notably basal-like breast cancers, induce the over-expression of a cell-surface exposed protein EphA2, making it a potent biomarker for cancer diagnosis as well as a therapeutic target. Using a unique, high-throughput phage-display screening approach, UCSF researchers have successfully identified a novel human monoclonal antibody that recognizes a new epitope of EphA2, and upon recognizing EphA2 on the cell surface is able to be efficiently internalized. Internalizing antibodies are essential technologies for the targeted delivery of anti-cancer drugs.

This novel invention provides the following advantages:

- ▶ A new tool with which to target EphA2: a validated therapeutic target for many forms of cancer, including basal-type breast cancers
- ▶ Targeted delivery of anti-cancer drugs through the use of internalizing antibodies with cancer-specific epitopes

TECHNOLOGY DESCRIPTION

UCSF researchers have taken a high-throughput screening approach to identify novel human antibodies against cell-surface proteins commonly over-expressed in cancer cells. The approach involves rounds of selection of a human antibody phage-display library for internalization in a human breast cancer cell line, and further enrichment of antibodies that bind human proteins of interest by expressing them (in their surface-displayed form) in yeast. The result of this approach has produced a novel human antibody against the validated cancer target EphA2.

APPLICATION

- ▶ Research tool
- ▶ Diagnostic

CONTACT

Lei Wan
lei.wan@ucsf.edu
tel: .



OTHER INFORMATION

KEYWORDS

Antibody, Cancer, Oncology, EphA2

CATEGORIZED AS

- ▶ Medical
- ▶ Diagnostics
- ▶ Disease: Cancer
- ▶ Therapeutics

RELATED CASES

2009-106-0

► [Therapy for basal-like breast cancers or other forms of cancer](#)

LOOKING FOR PARTNERS

To develop and commercialize this novel antibody as a research tool for the study of, diagnosis of, or therapy for certain forms of cancer.

STAGE OF DEVELOPMENT

Preclinical

RELATED MATERIALS

► [Discovery of internalizing antibodies to basal breast cancer cells](#)

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	10,406,225	09/10/2019	2009-106
United States Of America	Issued Patent	9,446,125	09/20/2016	2009-106
United States Of America	Issued Patent	9,220,772	12/29/2015	2009-106

ADDRESS

UCSF
Innovation Ventures
600 16th St, Genentech Hall, S-272,
San Francisco,CA 94158

CONTACT

Tel:
innovation@ucsf.edu
<https://innovation.ucsf.edu>
Fax:

CONNECT

 Follow  Connect

© 2019, The Regents of the University of California
[Terms of use](#) [Privacy Notice](#)