



## CellFace™ T Cell-Antibody CF381 (Anti-CEACAM5) Conjugate

Cat. No.: CF-AB-P381

This product is for research use only and is not approved for use in humans or in clinical diagnosis.

### Product Overview

#### Description

Employing live cells as therapeutics is a direction of future drug discovery. An easy and robust method to modify the surfaces of cells directly to incorporate novel functionalities is highly desirable. However, genetic methods for cell-surface engineering are laborious and limited by low efficiency for primary cell modification. Creative Biolabs has developed a single-step chemoenzymatic CellFace™ technology platform to transfer bio-macromolecules, such as an IgG antibody (MW~ 150 KD), to the glycocalyx on the surfaces of live cells. Requiring no genetic modification, our CellFace™ allows for any antibody to be conjugated to the stimulatory surface receptors of immune cells to yield the additive effect of superior tumor targeting to its already potent and off-the-shelf biologic drug payloads.

We applied CellFace™ method to construct the CellFace™ T cell-antibody conjugate. The CellFace™ T Cell-Antibody Conjugate is constructed from a T cell line modified with an therapeutic antibody. The modified T cell-conjugate is expected to exhibit novel functions of specific tumor targeting and can be used as a research tool for therapeutic applications.

#### CellFace™ Platform

Creative Biolabs' CellFace™ Conjugate Technology is a single-step, chemical enzyme-based approach that can quickly engineer cell surfaces in minutes. Through this fast, simple and cost-effective technique, biomacromolecules including proteins (antibodies, antigens) and nucleic acids, as well as small molecule probes such as fluorescent and biophysical probes, are efficiently conjugated without the need for genetic modification of host cells.

#### Fast

A unique catalytic enzyme that transfers the conjugate to the cell surface of living cells in a matter of minutes

#### Simple

A single-step chemical enzymatic reaction method provides a general method for engineering cells as a research tool and for therapeutic applications

### Cost-Effective

A one-pot approach to combine the synthesis of GDP-fucose derivatives with the subsequent transfer and made this engineering technology practical and cost-effective

|                   |                                                                                                                           |
|-------------------|---------------------------------------------------------------------------------------------------------------------------|
| Cell Type         | T Cell                                                                                                                    |
| Applications      | Cell Therapy                                                                                                              |
| Application Notes | The antibody-cell conjugates (ACCs) can be customized with both cell lines and primary cells according to customer needs. |
| Relevant Diseases | Colorectal cancer                                                                                                         |
| Clone             | CF381                                                                                                                     |
| Type              | Whole Antibody                                                                                                            |

## Target

|               |                                     |
|---------------|-------------------------------------|
| Target        | CEACAM5                             |
| Official Name | CA9                                 |
| Full Name     | Carbonic anhydrase IX (CA9/CA IX)   |
| Synonyms      | CA9; CAIX; MN; carbonic anhydrase 9 |

## Quality Control

|                    |                                                                                                                                                                                                                                                                                                                                  |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cell Purity        | >95%                                                                                                                                                                                                                                                                                                                             |
| Cell Viability     | >90%                                                                                                                                                                                                                                                                                                                             |
| Mycoplasma Testing | The cell line has been screened using the luciferase based mycoplasma detection kit to confirm the absence of mycoplasma species.                                                                                                                                                                                                |
| Sterility Testing  | Creative Biolabs provides sterility testing in accordance with USP and EP regulations. All of our sterility testing is performed in an isolator or clean room environments. The cell line has been screened using the membrane filtration testing methods to confirm the absence of aerobic, anaerobic and fungi microorganisms. |
| Research Use Only  | For research use only, not for diagnostic or therapeutic use.                                                                                                                                                                                                                                                                    |