Synonym

EGFRvIII

Source

Alexa Fluor 488-Labeled Human EGFRvIII, His Tag (EGI-HA2H7) is produced via conjugation of AF488 to Human EGFRvIII, His Tag with a new generation site-specific technology under Star Staining labeling platform. Human EGFRvIII, His Tag is expressed from human 293 cells (HEK293). It contains AA Leu 25 - Ser 378 (Accession # NP_001333870.1).

Predicted N-terminus: Leu 25

Molecular Characterization

This protein carries a polyhistidine tag at the C-terminus

The protein has a calculated MW of 53.0 kDa.

Conjugate

AF488

Excitation Wavelength: 488 nm

Emission Wavelength: 517 nm

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.
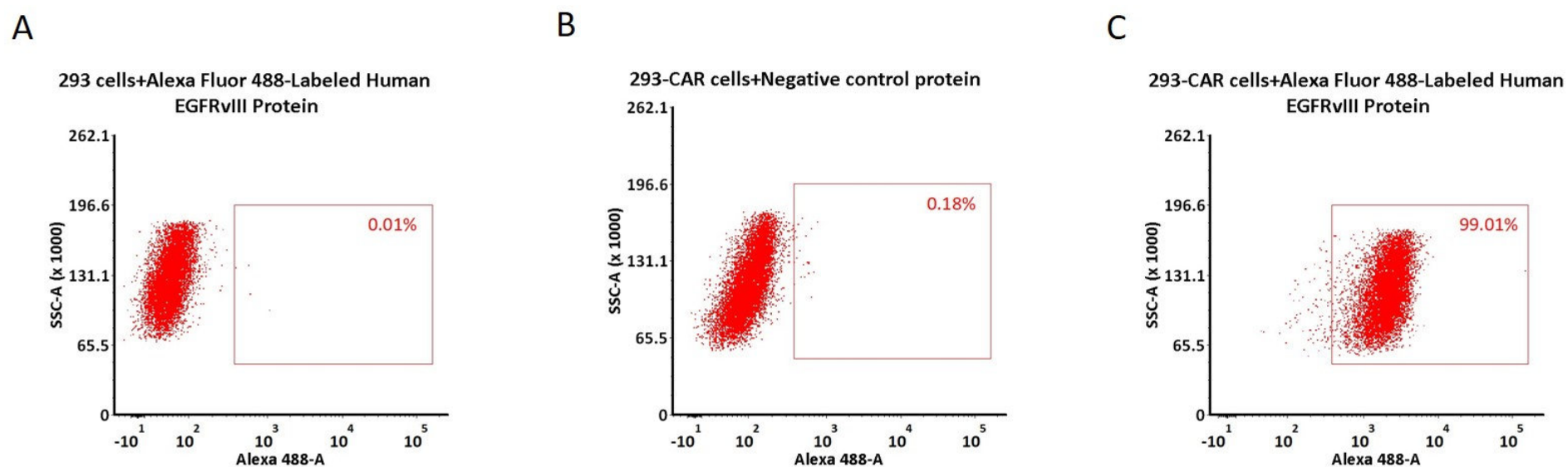
Please protect from light and avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.
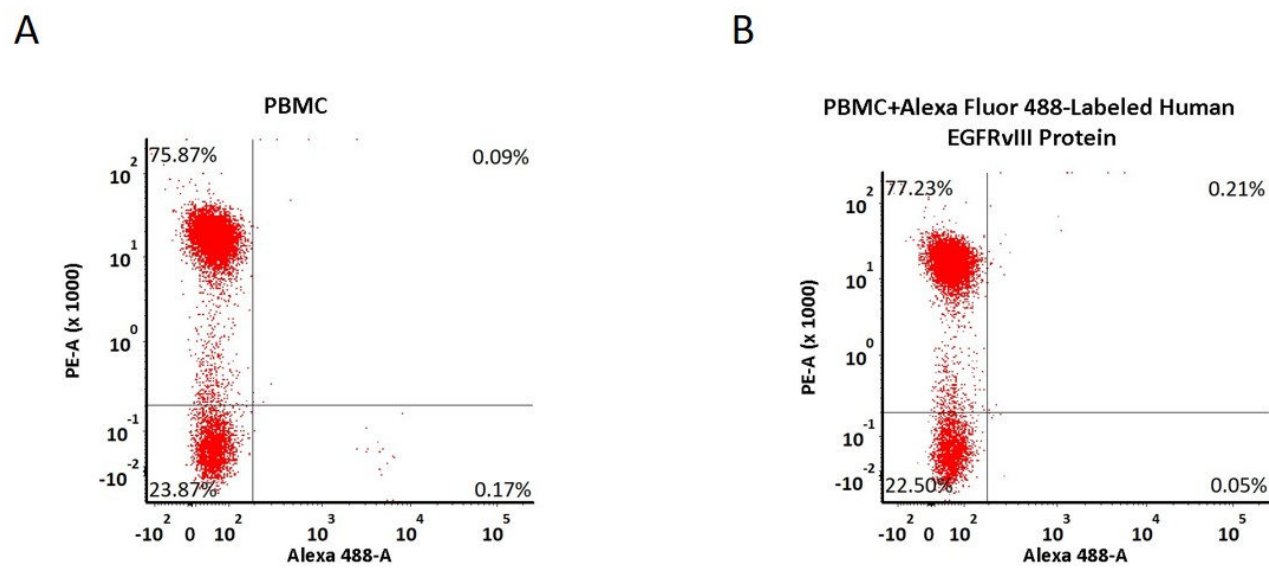
Evaluation of CAR expression

FACS Analysis of Anti-EGFRvIII CAR Expression

5e5 of anti-EGFRvIII CAR-293 cells were stained with 100 μL of 20 μg/mL of Alexa Fluor 488-Labeled Human EGFRvIII, His Tag (Cat. No. EGI-HA2H7) and negative control protein respectively (Fig. C and B), and non-transfected 293 cells were used as a control (Fig. A). Alexa Fluor 488 signal was used to evaluate the binding activity (QC tested).

FACS Analysis of Non-specific binding to PBMCs

5e5 of PBMCs were stained with Alexa Fluor 488-Labeled Human EGFRvIII, His Tag (Cat. No. EGI-HA2H7) and anti-CD3 antibody, washed and then analyzed with FACS. PE signal was used to evaluate the expression of CD3+ T cells in PBMCs, and Alexa Fluor 488 signal was used to evaluate the non-specific binding activity to PBMCs (QC tested).

Background

The epidermal growth factor receptor (EGFR; ErbB-1; HER1 in humans) is the cell-surface receptor for members of the epidermal growth factor family (EGF-family) of extracellular protein ligands. The epidermal growth factor receptor is a member of the ErbB family of receptors, a subfamily of four closely related receptor tyrosine kinases: EGFR (ErbB-1), HER2/c-neu (ErbB-2), Her 3 (ErbB-3) and Her 4 (ErbB-4). Mutations affecting EGFR expression or activity could result in cancer.

The type III EGF deletion mutant receptor (EGFRvIII) is the most common mutation and was first identified in primary human glioblastoma tumors. This tumor-specific antigen is ligand-independent, contains a constitutively active tyrosine kinase domain, and has been shown to be present in a number of human malignancies. EGFRvIII has been selected as a target for CAR-modified T-cell studies in recent years.

Clinical and Translational Updates

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.