



**Synonym**

EGFRvIII

**Source**

PE-Labeled Human EGFRvIII, His Tag (EGI-HP2H6) is produced via conjugation of PE 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**

PE

Excitation Wavelength: 488 nm / 561 nm

Emission Wavelength: 575 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, 0.2% BSA, 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.

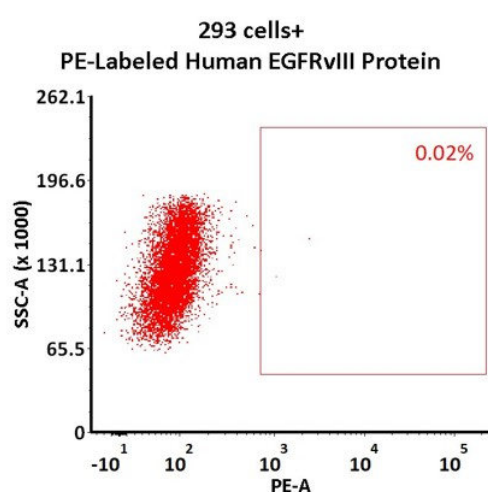
**Star Staining** fluorescent-labeled products are developed by a new-generation site-specific labeling technology with Star Standard quality at ACROBiosystems

- ★ Using new-generation site-specific labeling technology to maintain natural bioactivity.
- ★ High specificity and sensitivity verified by flow cytometry.
- ★ No non-specific binding to non-transduced PBMCs.
- ★ High homogeneity and high batch-to-batch consistency.

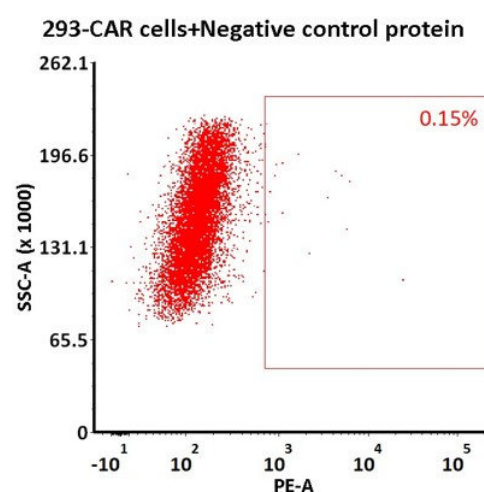
**Evaluation of CAR expression**

FACS Analysis of Anti-EGFRvIII CAR Expression

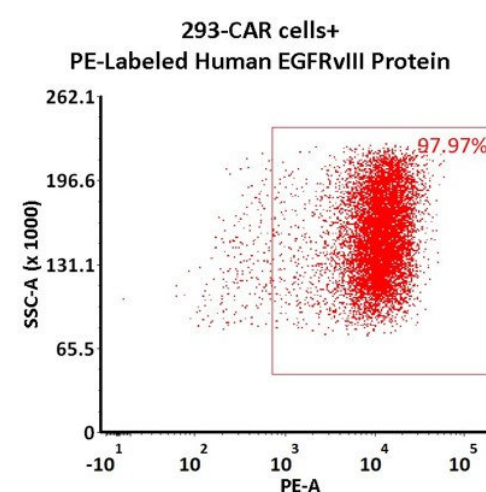
A



B



C



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# PE-Labeled Human EGFRvIII Protein, His TagStar Staining

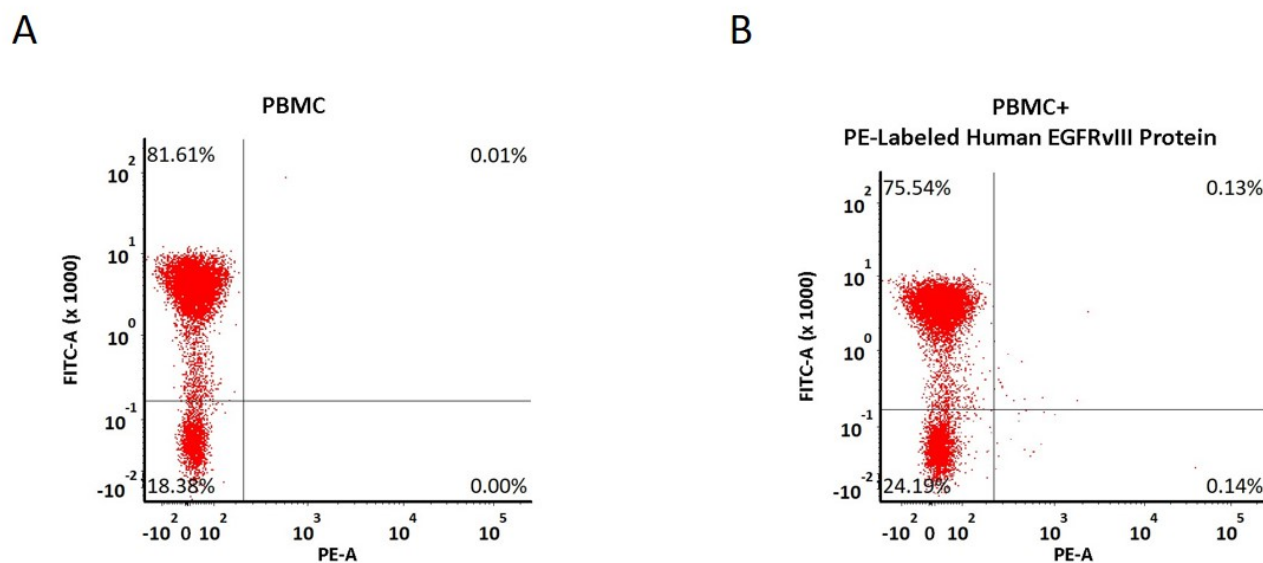
Catalog # EGI-HP2H6



BIOSYSTEMS  
**Acro**

5e5 of anti-EGFRvIII CAR-293 cells were stained with 100  $\mu$ L of 1:50 dilution (2  $\mu$ L stock solution in 100  $\mu$ L FACS buffer) of PE-Labeled Human EGFRvIII, His Tag (Cat. No. EGI-HP2H6) and negative control protein respectively (Fig. C and B), and non-transfected 293 cells were used as a control (Fig. A). PE signal was used to evaluate the binding activity (QC tested).

FACS Analysis of Non-specific binding to PBMCs



5e5 of PBMCs were stained with PE-Labeled Human EGFRvIII, His Tag (Cat. No. EGI-HP2H6) and anti-CD3 antibody, washed and then analyzed with FACS. FITC signal was used to evaluate the expression of CD3<sup>+</sup> T cells in PBMCs, and PE 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

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