



## Synonym

EGFRvIII

## Source

Biotinylated Human EGFRvIII, His,Avitag(EGR-H82E0) 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

EGFRvIII(Leu 25 - Ser 378)  
NP\_001333870.1 Poly-his Avi

This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 42.2 kDa. The protein migrates as 60-90 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Labeling

*Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.*

## Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

## Endotoxin

Less than 1.0 EU per µg by the LAL method.

## Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

## 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

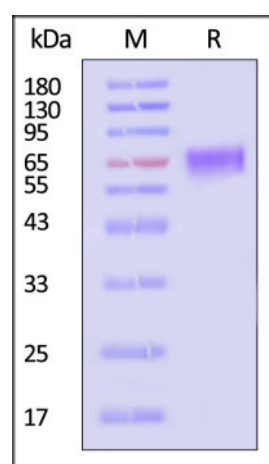
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please 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.

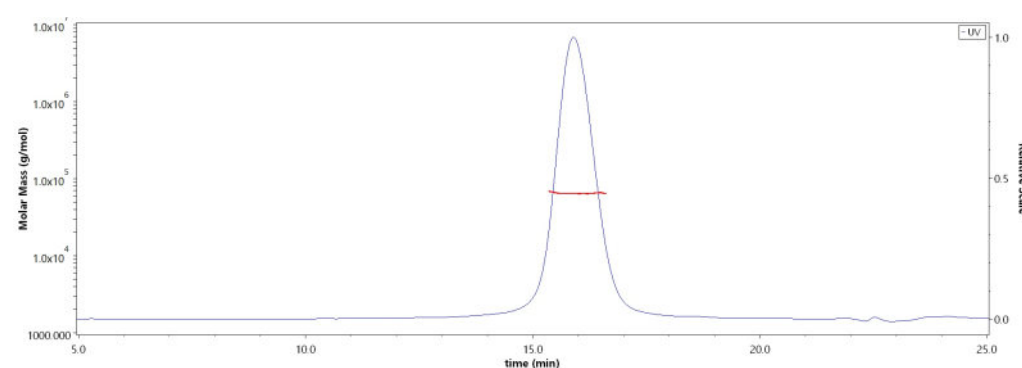
## SDS-PAGE



Biotinylated Human EGFRvIII, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

## Bioactivity-ELISA

## SEC-MALS

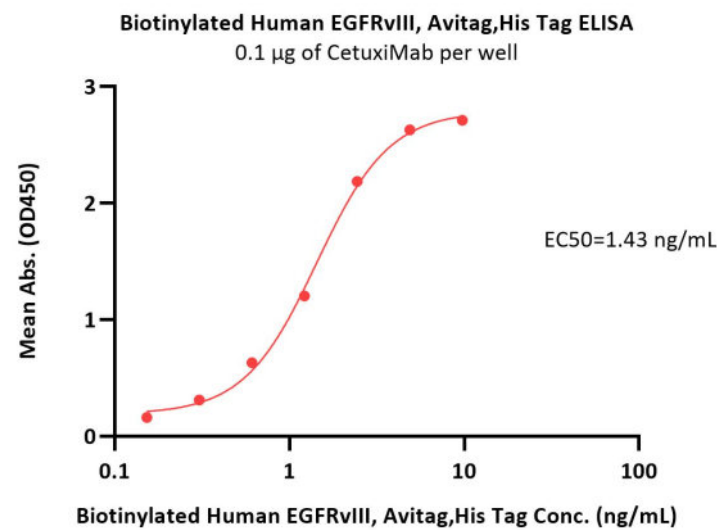
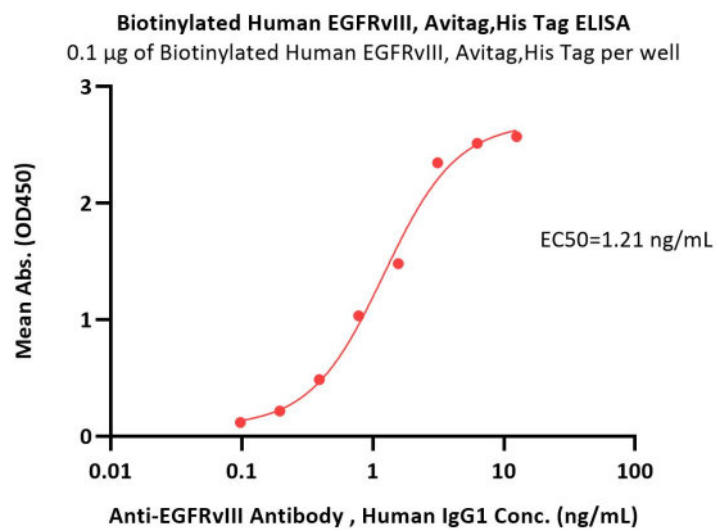


The purity of Biotinylated Human EGFRvIII, His,Avitag (Cat. No. EGR-H82E0) is more than 90% and the molecular weight of this protein is around 60-70 kDa verified by SEC-MALS.

[Report](#)

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Immobilized Biotinylated Human EGFRvIII, His,Avitag (Cat. No. EGR-H82E0) at 1 µg/mL (100 µL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 µg/well) plate can bind Anti-EGFRvIII Antibody, Human IgG1 with a linear range of 0.1-3 ng/mL (QC tested).

Immobilized CetuxiMab at 1 µg/mL (100 µL/well) can bind Biotinylated Human EGFRvIII, His,Avitag (Cat. No. EGR-H82E0) with a linear range of 0.2-2 ng/mL (Routinely 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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