Biotinylated Human EGF R Protein, His,Avitag™ (MALS verified)

Catalog # EGR-H82E3

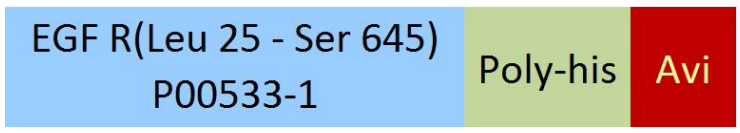
Synonym

EGFR,ERBB,ERBB1,HER1,PIG61,mENA

Source

Biotinylated Human EGF R, His,Avitag(EGR-H82E3) is expressed from human 293 cells (HEK293). It contains AA Leu 25 - Ser 645 (Accession # P00533-1). Predicted N-terminus: Leu 25

Molecular Characterization



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

The protein has a calculated MW of 72.3 kDa. The protein migrates as 100-115 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 0.1 EU per μg by the LAL method / rFC method.

Purity

>90% 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

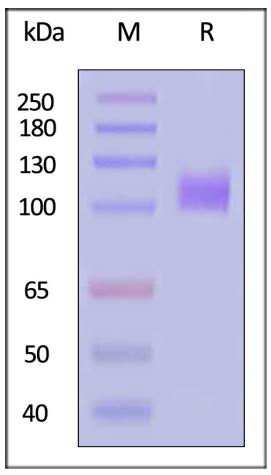
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

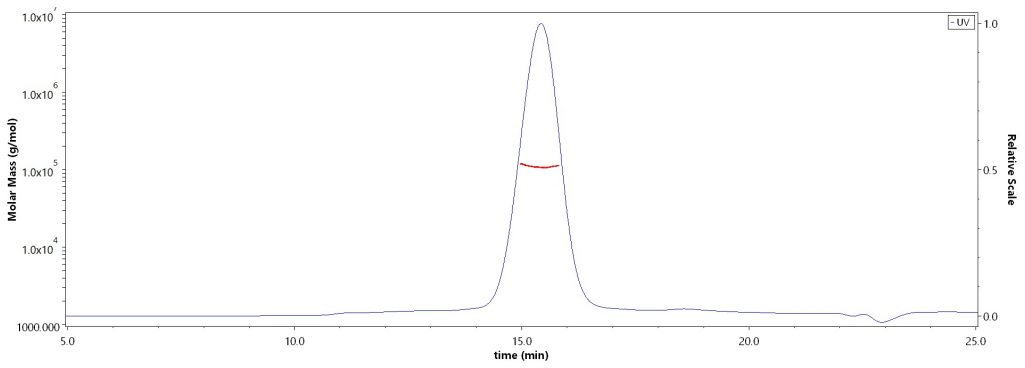
- -20°C to -70°C for 24 months in lyophilized state;
- -70°C for 12 months under sterile conditions after reconstitution.

SDS-PAGE



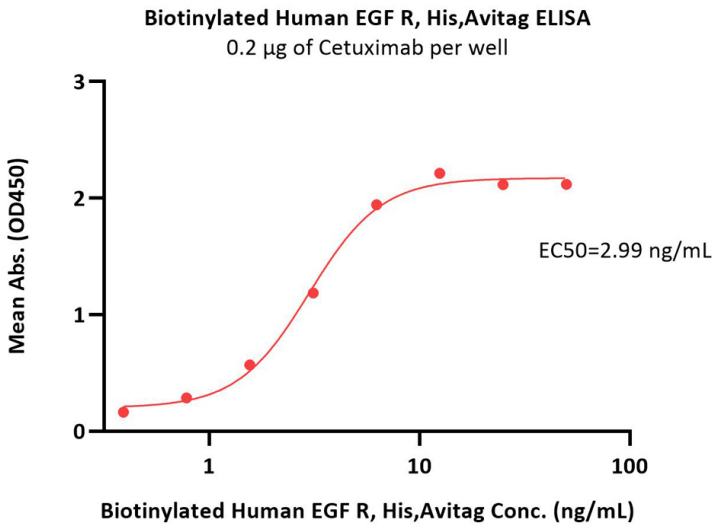
Biotinylated Human EGF R, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).

SEC-MALS

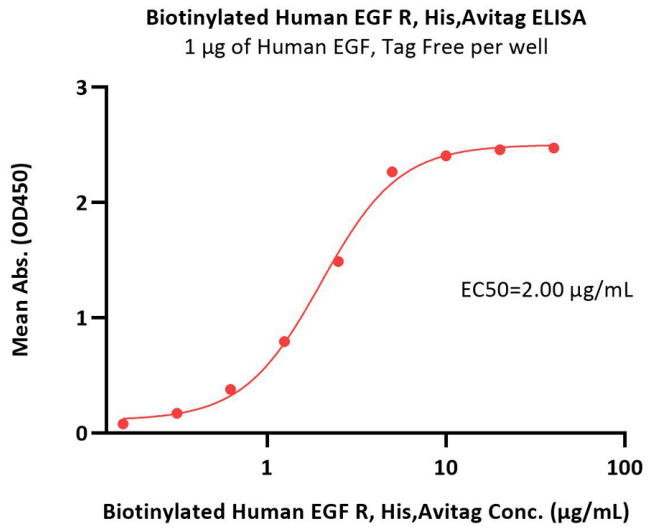


The purity of Biotinylated Human EGF R, His,Avitag (Cat. No. EGR-H82E3) is more than 90% and the molecular weight of this protein is around 80-110 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA



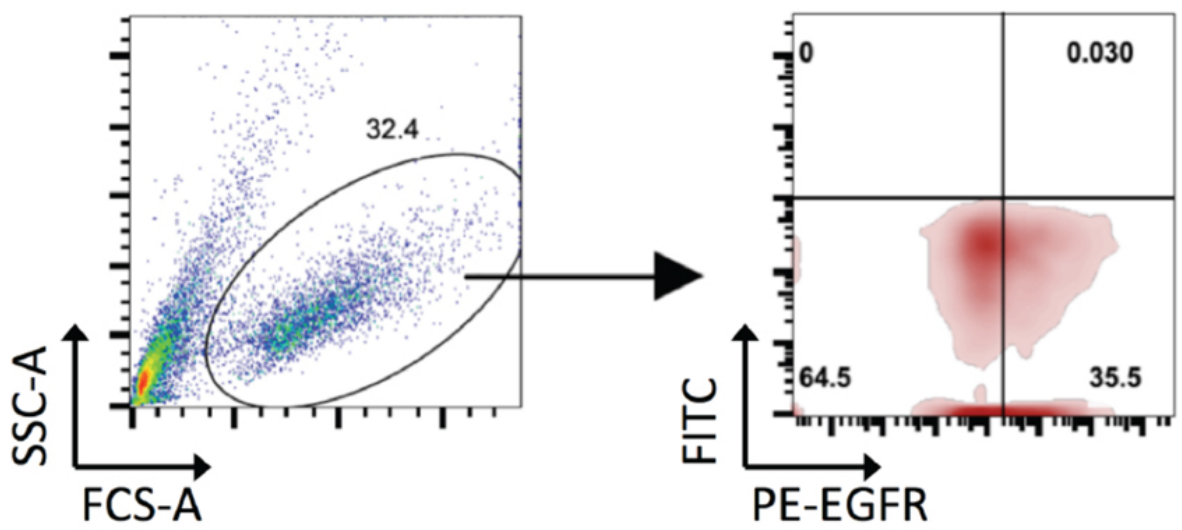
Immobilized Cetuximab at 2 μg/mL (100 μL/well) can bind Biotinylated Human EGF R, His,Avitag (Cat. No. EGR-H82E3) with a linear range of 2-6 ng/mL (QC tested).



Immobilized Human EGF, Tag Free at 10 μg/mL (100 μL/well) can bind Biotinylated Human EGF R, His,Avitag (Cat. No. EGR-H82E3) with a linear range of 0.156-5 μg/mL (Routinely tested).

Evaluation of CAR expression

FACS Analysis of biotinylated EGFR binding cell surface anti-EGFR scFv



Cells were transfected with anti-EGFR scFv and cultured for 3 days. Three days post-transfection, 1e6 cells were stained for anti-EGFR scFv with Biotinylated Human EGFR, His,Avitag (Cat. No. EGR-H82E3) followed by PE-conjugated streptavidin. Flow Cytometry assay shows that Biotinylated Human EGFR, His,Avitag (Cat. No. EGR-H82E3) can bind to cells expressing anti-EGFR scFv. The concentration of EGFR used is 0.8 μg/mL. (Data are kindly provided by Guangzhou Bio-gene Technology Co. Ltd.)

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.