

### **Synonym**

EGFR, ERBB, ERBB1, HER1, PIG61, mENA

#### **Source**

Human EGF R, His Tag(EGR-H5222) is expressed from human 293 cells (HEK293). It contains AA Leu 25 - Ser 645 (Accession # P00533-1). Predicted N-terminus: Leu 25

### **Molecular Characterization**

EGF R(Leu 25 - Ser 645) P00533-1

Poly-his

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 70.5 kDa. The protein migrates as 95-110 kDa when calibrated against <u>Star Ribbon Pre-stained Protein Marker</u> under reducing (R) condition (SDS-PAGE) due to glycosylation.

### **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  $\mu m$  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

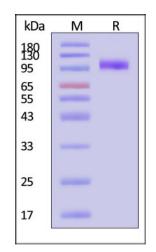
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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.

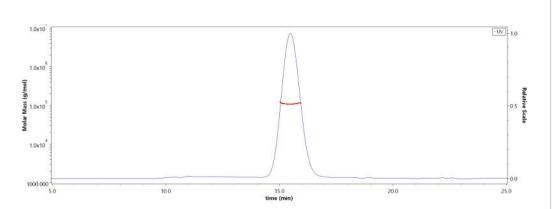
### **SDS-PAGE**



Human EGF R, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With <u>Star Ribbon Pre-stained Protein Marker</u>).

### **Bioactivity-ELISA**

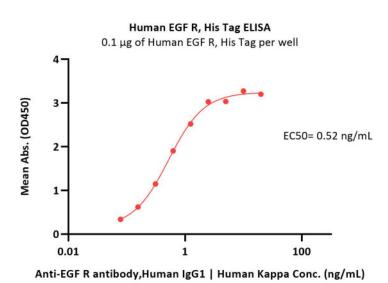
### **SEC-MALS**



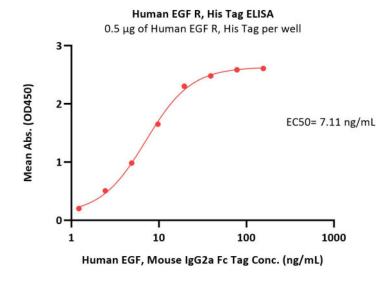
The purity of Human EGF R, His Tag (Cat. No. EGR-H5222) is more than 90% and the molecular weight of this protein is around 80-105 kDa verified by SEC-MALS.

Report

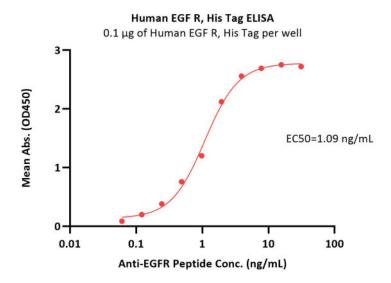




Immobilized Human EGF R, His Tag (Cat. No. EGR-H5222) at 1  $\mu$ g/mL (100  $\mu$ L/well) can bind Anti-EGF R antibody,Human IgG1 | Human Kappa with a linear range of 0.12-1.25 ng/mL (QC tested).



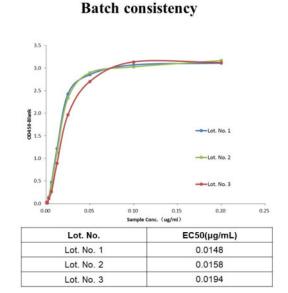
Immobilized Human EGF R, His Tag (Cat. No. EGR-H5222) at 5  $\mu$ g/mL (100  $\mu$ L/well) can bind Human EGF, Mouse IgG2a Fc Tag (Cat. No. EGF-H525b) with a linear range of 1-20  $\mu$ g/mL (Routinely tested).

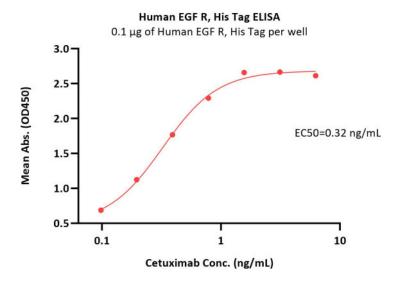


Immobilized Human EGF R, His Tag (Cat. No. EGR-H5222) at 1  $\mu$ g/mL (100  $\mu$ L/well) can bind Anti-EGFR Peptide with a linear range of 0.06-2 ng/mL (Routinely tested).

### **Bioactivity-SPR**





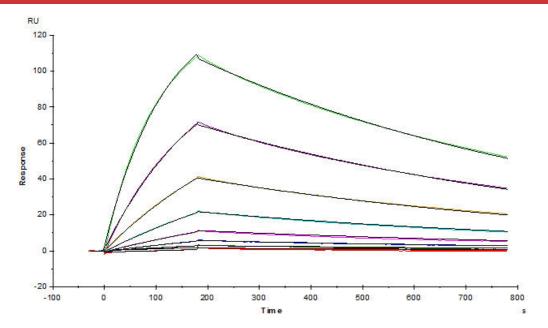


Immobilized Human EGF R, His Tag (Cat. No. EGR-H5222) at 1  $\mu$ g/mL (100  $\mu$ L/well) can bind Cetuximab with a linear range of 0.1-1 ng/mL (Routinely tested).

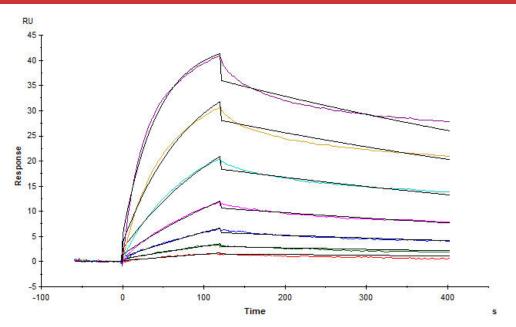
## **Human EGF R Protein, His Tag (MALS verified)**

Catalog # EGR-H5222



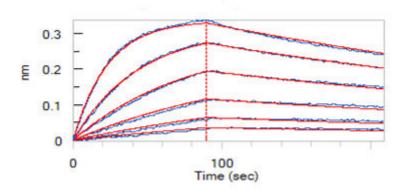


Erbitux (Cetuximab) captured on CM5 chip via anti-human IgG Fc antibodies surface, can bind Human EGF R, His Tag (Cat. No. EGR-H5222) with an affinity constant of 1.3 nM as determined in a SPR assay (Biacore T200) (Routinely tested).



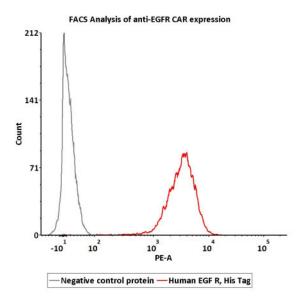
Human EGF R, His Tag (Cat. No. EGR-H5222) captured on CM5 Chip via anti-His antibody can bind Human EGF, Mouse IgG2a Fc Tag (Cat. No. EGF-H525b) with an affinity constant of 2.63 nM as determined in SPR assay (Biacore T200) (Routinely tested).

### **Bioactivity-BLI**



Loaded Erbitux (Cetuximab) on AHC Biosensor, can bind Human EGF R, His Tag (Cat. No. EGR-H5222) with an affinity constant of 1.23 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

### **Bioactivity-FACS**



2e5 of Anti-EGFR CAR-293 cells were stained with 100  $\mu$ L of 1  $\mu$ g/mL of Human EGF R, His Tag (Cat. No. EGR-H5222) and negative control protein respectively, washed and then followed by PE anti-His antibody and analyzed with FACS (Routinely tested).



# **Human EGF R Protein, His Tag (MALS verified)**

Catalog # EGR-H5222



## **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.

**Clinical and Translational Updates** 

