

**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 [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

**Endotoxin**Less than 1.0 EU per  $\mu$ g by the LAL method / rFC method.**Purity**

&gt;95% as determined by SDS-PAGE.

&gt;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.*

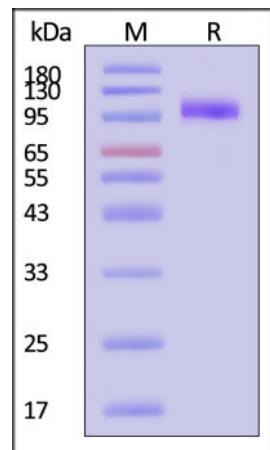
**Storage**

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

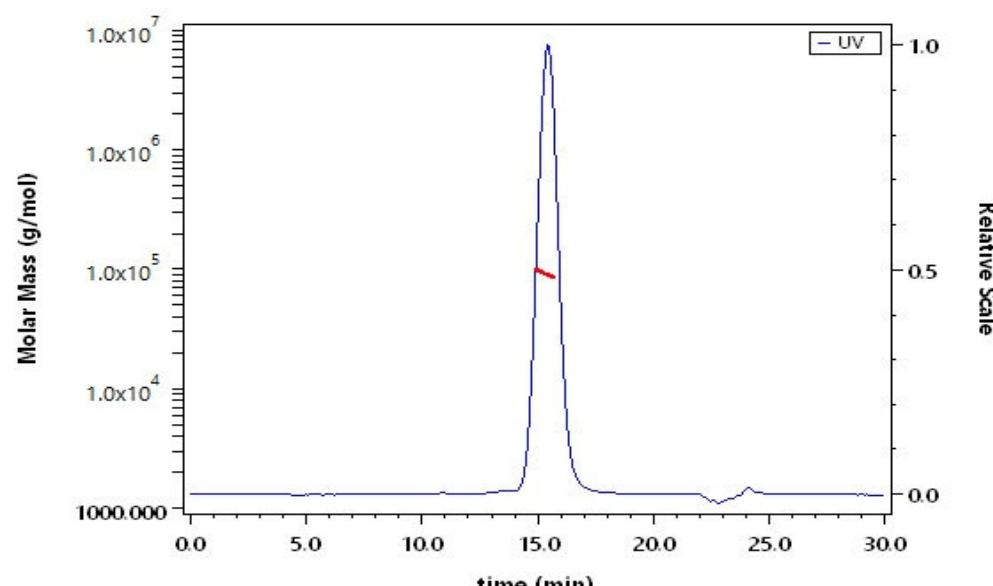
*Please avoid repeated freeze-thaw cycles.*

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.

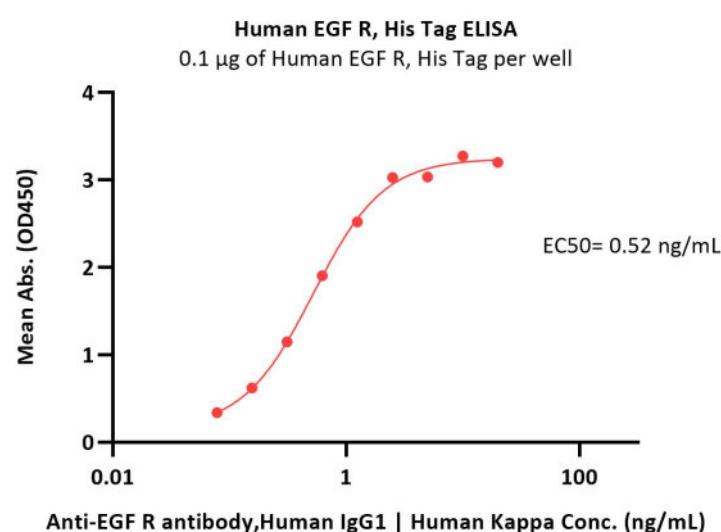
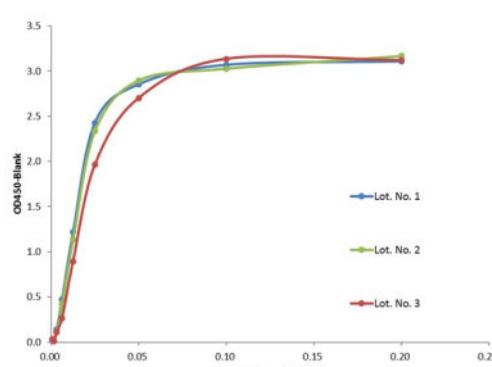
**SDS-PAGE**

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 [Star Ribbon Pre-stained Protein Marker](#)).

**SEC-MALS**

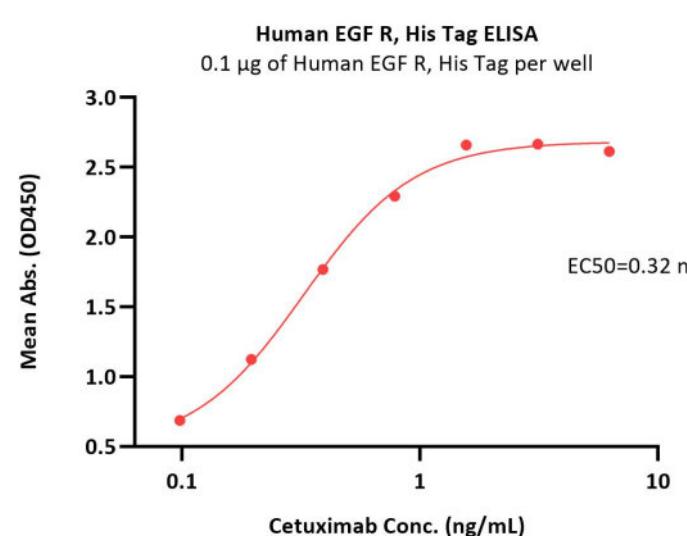
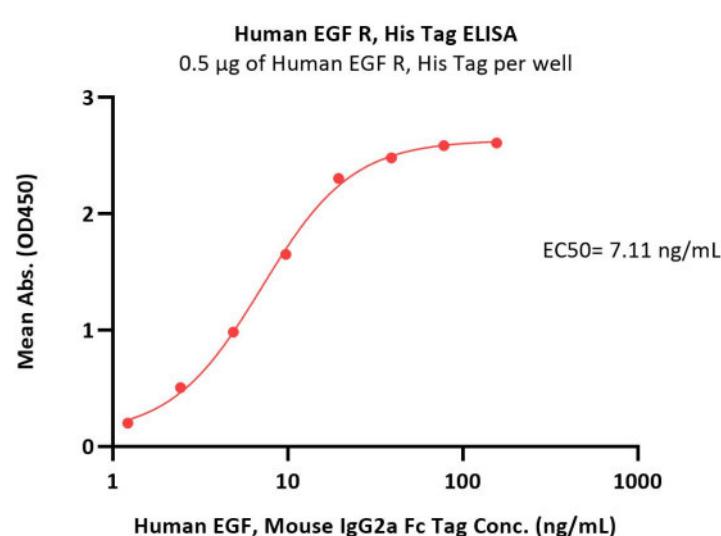
The purity of Human EGF R, His Tag (Cat. No. EGR-H5222) is more than 90% and the molecular weight of this protein is around 80-105 kDa verified by SEC-MALS.

[Report](#)**Bioactivity-ELISA**Discounts, Gifts,  
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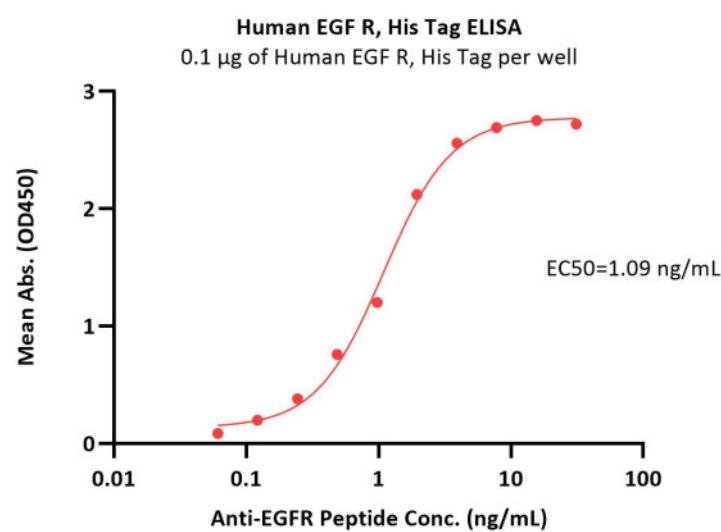
**Batch consistency**

Lot. No.	EC50(µg/mL)
Lot. No. 1	0.0148
Lot. No. 2	0.0158
Lot. No. 3	0.0194

Immobilized Human EGF R, His Tag (Cat. No. EGR-H5222) at 1 µg/mL (100 µL/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 µg/mL (100 µL/well) can bind Human EGF, Mouse IgG2a Fc Tag (Cat. No. EGF-H525b) with a linear range of 1-20 ng/mL (Routinely tested).



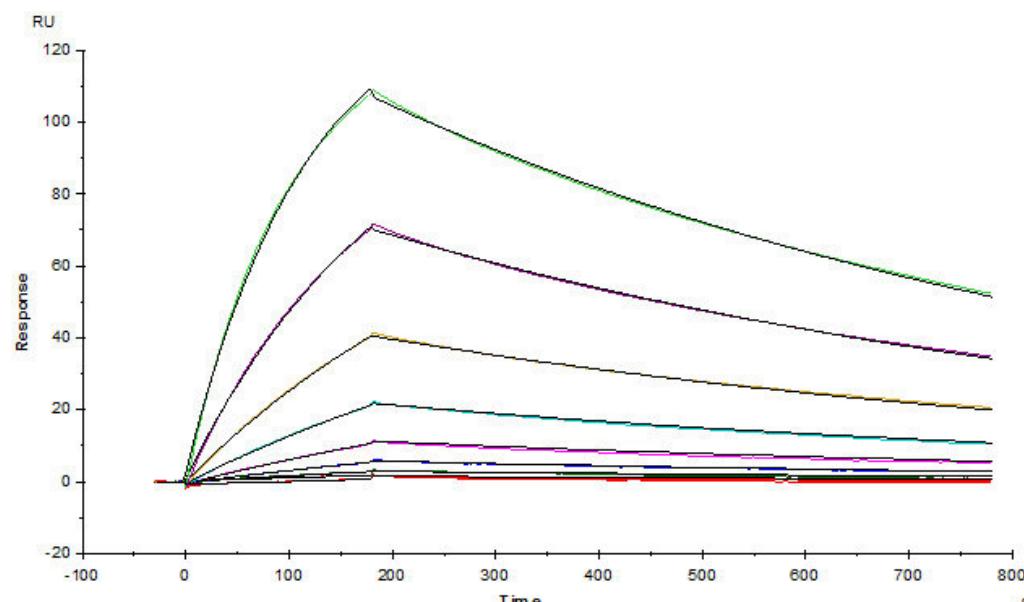
Immobilized Human EGF R, His Tag (Cat. No. EGR-H5222) at 1 µg/mL (100 µL/well) can bind Cetuximab with a linear range of 0.1-1 ng/mL (Routinely tested).

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

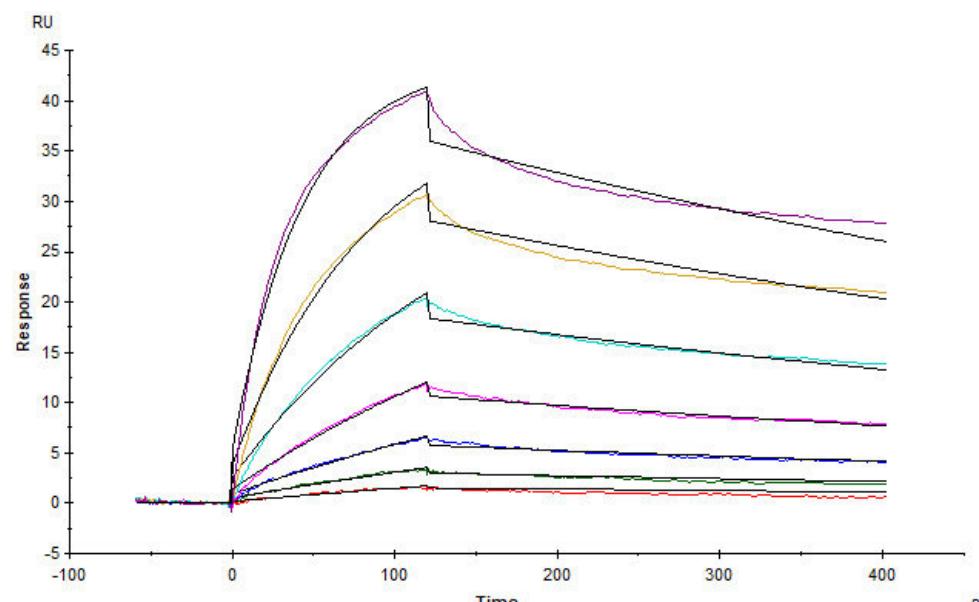
**Bioactivity-SPR**

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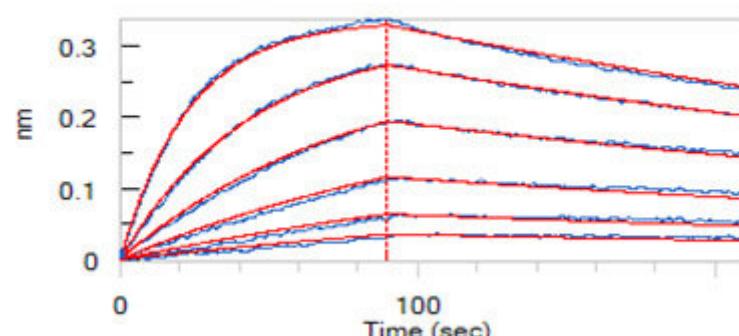


Erbitux (Cetuximab) captured on CM5 chip via anti-human IgG Fc antibodies surface, can bind Human EGF R, His Tag (Cat. No. EGR-H5222) with an affinity constant of 1.3 nM as determined in a SPR assay (Biacore T200) (Routinely tested).



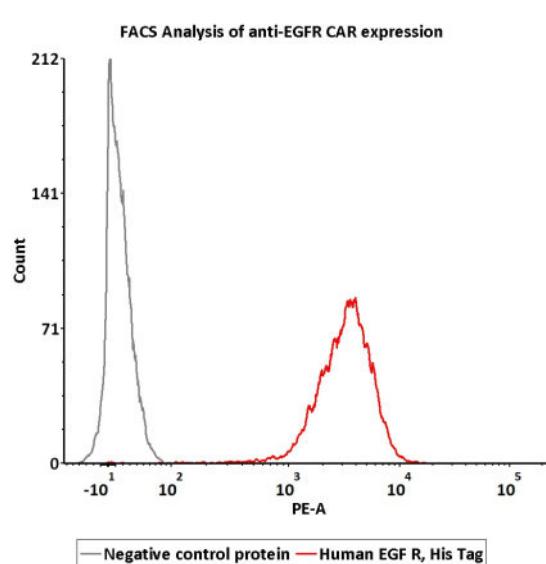
Human EGF R, His Tag (Cat. No. EGR-H5222) captured on CM5 Chip via anti-His antibody can bind Human EGF, Mouse IgG2a Fc Tag (Cat. No. EGF-H525b) with an affinity constant of 2.63 nM as determined in SPR assay (Biacore T200) (Routinely tested).

### 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).

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## 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.

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