

# Human EGFR / HER1 / ErbB1 Protein (Fc Tag)



Sino Biological  
Biological Solution Specialist

Catalog Number: 10001-H02H

## General Information

### Gene Name Synonym:

ERBB; ERBB1; HER1; mENA; NISBD2; PIG61

### Protein Construction:

A DNA sequence encoding the extracellular domain (Met 1-Ser 645) of human EGFR (NP\_005219) was fused with the Fc region of human IgG1 at the C-terminus.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 97 % as determined by SDS-PAGE

### Bio Activity:

**Measured by its binding ability in a functional ELISA. Immobilized recombinant human EGF at 10 µg/ml (100 µl/well) can bind human EGFR with a linear range of 0.64-400 ng/ml.**

### Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Leu 25

### Molecular Mass:

The recombinant human EGFR/Fc chimera is a homodimeric protein. The reduced monomer consists of 860 amino acids and has a calculated molecular mass of 95 kDa. As a result of glycosylation, the recombinant protein migrates as an approximately 130-140 kDa protein in SDS-PAGE under reducing conditions.

### Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

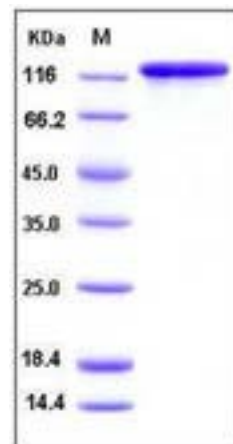
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

As a member of the epidermal growth factor receptor (EGFR) family, EGFR protein is type I transmembrane glycoprotein that binds a subset of EGF family ligands including EGF, amphiregulin, TGF- $\alpha$ , betacellulin, etc. EGFR protein plays a crucial role in signaling pathway in the regulation of cell proliferation, survival and differentiation. Binding of a ligand induces EGFR protein homo- or heterodimerization, the subsequent tyrosine autophosphorylation and initiates various down stream pathways (MAPK, PI3K/PKB and STAT). In addition, EGFR signaling also has been shown to exert action on carcinogenesis and disease progression, and thus EGFR protein is proposed as a target for cancer therapy currently.

## References

1.Schlessinger, J. (2000) Cell signaling by receptor tyrosine kinases. *Cell* 103(2): 211-25. 2.Giaccone, G. (2005) HER1/EGFR-targeted agents: predicting the future for patients with unpredictable outcomes to therapy. *Ann. Oncol.* 16(4): 538-48. 3.Yarden, Y., *et al.* (2001) Untangling the ErbB signalling network. *Nat. Rev. Mol. Cell. Biol.* 2(2): 127-37.

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**For US Customer:** Fax: 267-657-0217 • Tel: 215-583-7898

**Global Customer:** Fax :+86-10-5862-8288 • Tel:+86-400-890-9989 • <http://www.sinobiological.com>