

Human EGFR / HER1 / ErbB1 Protein (His Tag)

Catalog Number: 10001-H08H



Sino Biological
Biological Solution Specialist

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 expressed with a C-terminal polyhistidine tag.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE. >90% as determined by SEC-HPLC.

Bio Activity:

1. Measured by its binding ability in a functional ELISA. Immobilized Human EGF hFc (Cat: 10605-H01H) at 2 µg/ml (100 µl/well) can bind Human EGFR His (Cat: 10001-H08H), the EC₅₀ of Human EGFR His is 100-500 ng/mL.

2. Captured Cetuximab (IgG1) on proA Chip can bind Human EGFR recombinant protein (Cat: 10001-H08H) with an affinity constant of 1.07 µM as determined in an SPR assay (Biacore T200).

3. Loaded Cetuximab on ProA Biosensor, can bind Human EGFR protein, His & AVI Tag (Cat. No. 10001-H08H) with an affinity constant of 5.81 nM as determined in BLI assay (ForteBio Octet Red384) (Routinely tested).

Endotoxin:

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

Predicted N terminal: Leu 25

Molecular Mass:

The recombinant human EGF receptor consists of 630 amino acids and has a calculated molecular mass of 69.8 kDa. As a result of glycosylation, the recombinant protein migrates as an approximately 110 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

Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C.

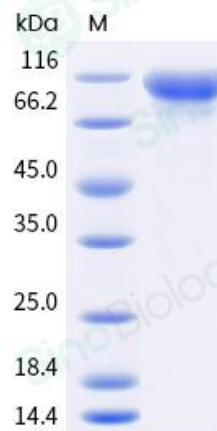
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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-α, 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

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