

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 nM as determined in an SPR assay (Biacore T200) (Routinely tested).

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

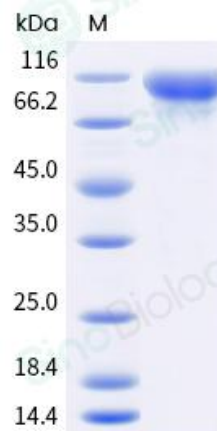
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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.

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