

EGFR Protein, Human, Recombinant (hFc)

General Information

Synonyms:	ERBB;mENA;HER1;ERBB1;PIG61;NISBD2;epidermal growth factor receptor
Protein Construction:	Leu25-Ser645
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P00533
Molecular Weight:	95 kDa (predicted); 110-140 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Immobilized Human EGF, No Tag at 5 µg/ml (100 µl/well) on the plate. Dose response curve for Human EGFR, hFc Tag with the EC50 of 0.44 µg/ml determined by ELISA (QC Test).
Purity:	> 95% as determined by Bis-Tris PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from 0.22 µm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 µg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

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. Cancer Immunotherapy/Immune Checkpoint Immunotherapy/Targeted Therapy

Reference

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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