

EGFR Protein, Mouse, Recombinant (His)

General Information

Synonyms:	Errp;AI552599;Errb1;9030024J15Rik;wa2;ErbB;wa-2;Wa5;epidermal growth factor receptor
Protein Construction:	A DNA sequence encoding the extracellular domain of mouse EGFR (Q01279) (Met 1-Ser 647) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Leu 25
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q01279
Molecular Weight:	70.8 kDa (predicted); 100 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	<ol style="list-style-type: none">1. Measured by its binding ability in a functional ELISA.2. Immobilized mouse EGFR-his at 10 µg/mL (100 µl/well) can bind human EGF-Fc, The EC50 of human EGF-Fc is 60-90 ng/mL.3. Immobilized mouse EGFR-his at 10 µg/mL (100 µl/well) can bind mouse EGF-Fc, The EC50 of mouse EGF-Fc is 70-100 ng/mL.
Purity:	≥ 95 % as determined by SDS-PAGE. ≥ 85 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:	Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.
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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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