

Active Recombinant Human EGFR protein, Fc/Avi-tagged, Biotinylated

Cat. No. EGFR-051H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human EGFR Protein (25-645aa), was expressed in HEK293 cells with C-terminal Fc/Avi tag and biotinylated conjugate.
Species	Human
Source	HEK293
ProteinLength	25-645 aa
Description	The EGFR subfamily of receptor tyrosine kinases comprises four members: EGFR (also known as HER-1, ErbB1, or ErbB), ErbB2 (Neu, HER-2), ErbB3 (HER-3), and ErbB4 (HER-4). All family members are type I transmembrane glycoproteins with an extracellular ligand binding domain containing two cysteine-rich domains separated by a spacer region and a cytoplasmic domain containing a membrane-proximal tyrosine kinase domain followed by multiple tyrosine autophosphorylation sites (1-4). Soluble receptors consisting of the extracellular ligand binding domain are generated by alternate splicing in human and mouse (5-7). Within the mature ECD, human EGFR shares 88% aa sequence identity with mouse and rat EGFR. Human EGFR shares 43%-44% aa sequence identity with the ECD of human ErbB2, ErbB3, and ErbB4. EGFR binds a subset of the EGF family ligands, including EGF, amphiregulin, TGF-α, betacellulin, epiregulin, HB-EGF, and epigen (1, 2). Ligand binding induces EGFR homodimerization as well as heterodimerization with ErbB2, resulting in kinase activation, heterodimerization tyrosine

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

phosphorylation and cell signaling (8-12). EGFR can also be recruited to form heterodimers with the ligand-activated ErbB3 or ErbB4. EGFR signaling regulates multiple biological functions including cell proliferation, differentiation, motility, and apoptosis (13, 14). EGFR is overexpressed in a wide variety of tumors and is the target of several anti-cancer drugs (15).

Form	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.
Bio-activity	Measured by its binding ability in a functional ELISA. When Human EGFR (Research Grade Cetuximab Biosimilar) Antibody is immobilized at 0.25 µg/mL, 100 µL/well, the concentration of Recombinant Human EGFR Fc Chimera Avi-tag that produces 50% of the optimal binding response is approximately 2-15 ng/mL.
Molecular Mass	110-130 kDa, under reducing conditions
Endotoxin	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Applications	Bioactivity
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 3 months, -20 to -70 °C under sterile conditions after reconstitution.
Reconstitution	Reconstitute at 500 µg/mL in PBS.
Conjugation	Biotin

GENE INFORMATION

Gene Name	EGFR epidermal growth factor receptor [Homo sapiens]
Official Symbol	EGFR
Synonyms	EGFR; epidermal growth factor receptor; epidermal growth factor receptor (avian erythroblastic leukemia viral (v erb b) oncogene homolog) , ERBB; ERBB1; erythroblastic leukemia viral (v erb b) oncogene homolog (avian); proto-oncogene c-ErbB-1; cell growth inhibiting protein 40; cell proliferation-inducing protein 61; receptor tyrosine-protein kinase erbB-1; avian erythroblastic leukemia viral (v-erb-b) oncogene homolog; ERBB; HER1; mENA; PIG61;
Gene ID	1956
mRNA Refseq	NM_005228
Protein Refseq	NP_005219
MIM	131550
UniProt ID	P00533

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