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

Cat. No. EGFR-053H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human EGFR Protein (25-378aa), was expressed in CHO cells with C-terminal Fc/Avi tag and biotinylated conjugate.
Species	Human
Source	CHO
ProteinLength	25-378 aa
Description	Epidermal growth factor receptor (EGFR), also known as HER-1 and ErbB1, is a member of a subfamily of receptor tyrosine kinases comprised of four members: EGFR, ErbB2 (Neu, HER-2), ErbB3 (HER-3), and ErbB4 (HER-4). All family members are type I transmembrane glycoproteins with an extracellular domain (ECD) containing two cysteine-rich domains separated by a spacer region and a cytoplasmic domain containing a tyrosine kinase domain followed by multiple tyrosine autophosphorylation sites (1, 2). Several soluble isoforms lacking the intracellular domain are generated by alternate splicing (3-4). EGFRvIII is a tumor-specific mutation that results from an in-frame deletion removing 267 amino acids from the ECD and insertion of a glycine residue (5). EGFRvIII has a molecular mass of approximately 145 kDa and has been shown to have weaker activity than full-length EGFR (6). EGFR binds a subset of the EGF family ligands, including EGF, amphiregulin, TGF-alpha, betacellulin, epiregulin, HB-EGF, and epigen (1, 2). Ligand binding induces EGFR homodimerization as well as heterodimerization with ErbB2,

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

	resulting in kinase activation, heterodimerization tyrosine phosphorylation and cell signaling (7-9). EGFR can also be recruited to form heterodimers with the ligandactivated ErbB3 or ErbB4. EGFR signaling regulates multiple biological functions including cell proliferation, differentiation, motility, and apoptosis (7-9). EGFR is overexpressed in a wide variety of tumors, with EGFRvIII overexpressed particularly in glioblastoma multiforme (GMB), and is the target of several anti-cancer therapeutics (5,10,11). Our Avi-tag Biotinylated Recombinant Human EGFRvIII features biotinylation at a single site contained within the Avi-tag, a unique 15 amino acid peptide. Protein orientation will be uniform when bound to streptavidin-coated surface due to the precise control of biotinylation and the rest of the protein is unchanged so there is no interference in the protein's bioactivity.
Predicted N Terminal	Leu25
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 antibody is immobilized at 0.1 g/mL (100 μ/well), Biotinylated Recombinant Human EGFR Fc Chimera Avi-tag binds with an ED50 of 25-150 ng/mL.
Molecular Mass	95-115 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

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

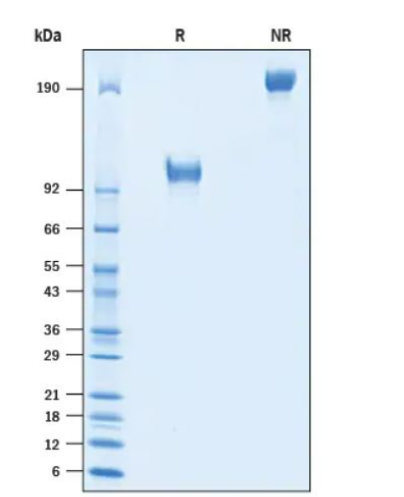
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles.12 months from date of receipt, -20 to -70 °C as supplied.1 month, 2 to 8 °C under sterile conditions after reconstitution.3 months, -20 to -70 °C under sterile conditions after reconstitution.
Reconstitution	Reconstitute at 500 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

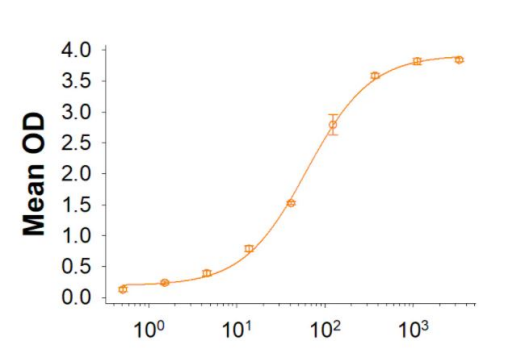
Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

SDS-PAGE



2 μg/lane Protein was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining.

Binding Activity



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