Active Recombinant Human Epidermal Growth Factor Receptor

Cat. No. EGFR-29H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human EGFR Protein (672-1210aa), was expressed in Sf9 cells (Baculovirus infected) (purified via proprietary chromatographic techniques).
Species	Human
Source	Sf9 Cells
ProteinLength	672-1210 aa
Description	The epidermal growth factor receptor (EGF R) subfamily of receptor tyrosine kinases comprises four members: EGF R (also known as HER1, ErbB1 or ErbB), ErbB2 (Neu, HER-2), ErbB3 (HER-3), and ErbB4 (HER-4). All family members are type I transmembrane glycoprotein that has an extracellular domain which contains two cysteine-rich domains separated by a spacer region that is involved in ligand-binding, and a cytoplasmic domain which has a membrane-proximal tyrosine kinase domain and a C-terminal tail with multiple tyrosine autophosphorylation sites. The human EGF R gene encodes a 1210 amino acid (aa) residue precursor with a 24 aa putative signal peptide, a 621 aa extracellular domain, a 23 aa transmembrane domain, and a 542 aa cytoplasmic domain. EGF R has been shown to bind a subset of the EGF family ligands, including EGF, amphiregulin, TGF-á, betacellulin, epiregulin, heparin-binding EGF and neuregulin-2 in the absence of a co-receptor. Ligand binding induces EGF R homodimerization as well as heterdimerization with ErbB2, resulting in kinase activation, tyrosine phosphorylation and cell signaling.

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Physical Appearance	Sterile filtered liquid.
Formulation	EGFR (0.16 mg/ml) in 50mM Tris-HCl, pH 8.0, 100mM NaCl, 5mM DTT, 15mM reduced glutathione and 20% glycerol.
Application And Suggested Dilutions	• ELISA • Inhibition Assays • Western Blotting.
Activity	Determination of Km value by Filter binding assay MAFC membrane. Specific activity: 23.000 pmol/mg min.
Characterization	On SDS-PAGE commassie blue stained gel, the purified recombinant protein shows a band at 91 kDa.
Storage	Store vial at -20ºC to -80ºC. When stored at the recommended temperature, this protein is stable for 12 months. Please avoid freeze-thaw cycles.

GENE INFORMATION

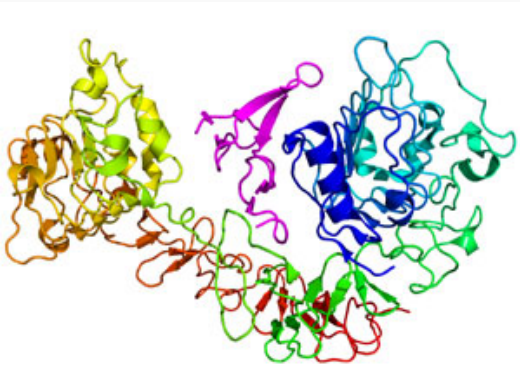
Gene Name	EGFR epidermal growth factor receptor (erythroblastic leukemia viral (v-erb-b) oncogene homolog, avian) [Homo sapiens]
Synonyms	EGFR; epidermal growth factor receptor (erythroblastic leukemia viral (v-erb-b) oncogene homolog, avian); ERBB1; Epidermal growth factor receptor; EC 2.7.10.1; Receptor tyrosine-protein kinase ErbB-1; ERBB; mENA; EGFR; HER1; PIG61; Receptor tyrosine-protein kinase ErbB-1; avian erythroblastic leukemia viral (v-erb-b) oncogene homolog; cell growth inhibiting protein 40; cell proliferation-inducing protein 61; epidermal growth factor receptor; epidermal growth factor receptor (avian erythroblastic leukemia viral (v-erb-b) oncogene homolog)
Gene ID	1956

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mRNA Refseq	NM_005228
Protein Refseq	NP_005219
MIM	131550
UniProt ID	P00533
Chromosome Location	7p12
Pathway	Adherens junction; Bladder cancer; Calcium signaling pathway; Colorectal cancer; Cytokine-cytokine receptor interaction; Dorso-ventral axis formation; Endocytosis; Endometrial cancer; Epithelial cell signaling in Helicobacter pylori infection; ErbB signaling pathway; Focal adhesion; Gap junction; Glioma; GnRH signaling pathway; MAPK signaling pathway; Melanoma; Non-small cell lung cancer; Pancreatic cancer; Prostate cancer; Regulation of actin cytoskeleton
Function	ATP binding; MAP/ERK kinase kinase activity; actin filament binding; double-stranded DNA binding; epidermal growth factor receptor activity; identical protein binding; nitric-oxide synthase regulator activity; nucleotide binding; protein heterodimerization activity; protein phosphatase binding; receptor signaling protein tyrosine kinase activity; transmembrane receptor activity ; transferase activity

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Cartoon diagram of the epidermal growth factor receptor (EGFR).



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