EGFR Blocking Peptide – >85% Purity

PRODUCT OVERVIEW

Product Name	EGFR, Blocking Peptide
Full Product Name	EGFR Blocking Peptide
Product Gene Name	EGFR blocking peptide
Product Synonym Names	ERBB; ERBB1; HER1; Epidermal growth factor receptor; Proto-oncogene c-ErbB-1; Receptor tyrosine-protein kinase erbB-1
Host	Synthetic
Species Reactivity	Human, Mouse
Form/Format	Lyophilized Powder
Purity/Purification	>85%
Preparation and Storage	Store at -20 degree C for one year.
Molecular Weight	134,277 Da
Chromosome Location	Chromosome: 7; NC_000007.13 (55086725..55275031). Location: 7p12
OMIM	131550
Quality Control	The quality of the peptide was evaluated by reversed-phase HPLC and by mass spectrometry.
Directions for Use	Blocking Peptide to the diluted primary antibody in a molar ratio of 10:1 (peptide to antibody) and incubate the mixture at 4 degree C for overnight or at room temperature for 2 hours.
Applications Tested/Suitable for EGFR blocking peptide	Blocking (BL)
Related Product Information for EGFR blocking peptide	MBS8309412 is a blocking peptide targeting EGFR. Reactive in Human, Mouse. Host: Synthetic. The peptide is used to block Anti-EGFR Antibody reactivity.
Other Notes	Small volumes of EGFR blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for EGFR. It may not necessarily be applicable to this product.

NCBI GI #	29725609
NCBI GeneID	1956
NCBI Accession #	NP_005219.2
UniProt Primary Accession #	P00533
UniProt Secondary Accession #	Q01279
UniProt Related Accession #	P00533
GenBank Nucleotide #	NM_005228.3
NCBI Official Full Name	epidermal growth factor receptor isoform a

NCBI Official Synonym Full Names	epidermal growth factor receptor
NCBI Official Symbol	EGFR
NCBI Official Synonym Symbols	ERBB; HER1; mENA; ERBB1; PIG61
UniProt Protein Name	Epidermal growth factor receptor
UniProt Synonym Protein Names	Proto-oncogene c-ErbB-1; Receptor tyrosine-protein kinase erbB-1
Protein Family	Epidermal growth factor receptor
UniProt Gene Name	EGFR
UniProt Synonym Gene Names	ERBB; ERBB1; HER1
UniProt Entry Name	EGFR_HUMAN
NCBI Protein Information	epidermal growth factor receptor; 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
NCBI Summary for EGFR	The protein encoded by this gene is a transmembrane glycoprotein that is a member of the protein kinase superfamily. This protein is a receptor for members of the epidermal growth factor family. EGFR is a cell surface protein that binds to epidermal growth factor. Binding of the protein to a ligand induces receptor dimerization and tyrosine autophosphorylation and leads to cell proliferation. Mutations in this gene are associated with lung cancer. Multiple alternatively spliced transcript variants that encode different protein isoforms have been found for this gene. [provided by RefSeq, Jul 2010]

UniProt Comments for EGFR	EGFR: a receptor tyrosine kinase. This is a receptor for epidermal growth factor (EGF) and related growth factors including TGF-alpha, amphiregulin, betacellulin, heparin-binding EGF-like growth factor, GP30, and vaccinia virus growth factor. EGFR is involved in the control of cell growth and differentiation. It is a single-pass transmembrane tyrosine kinase. Ligand binding to this receptor results in receptor dimerization, autophosphorylation (in trans), activation of various downstream signaling molecules and lysosomal degradation. It can be phosphorylated and activated by Src. Activated EGFR binds the SH2 domain of phospholipase C-gamma (PLC-gamma), activating PLC-gamma-mediated downstream signaling. Phosphorylated EGFR binds Cbl, leading to its ubiquitination and degradation. Grb2 and SHC bind to phospho-EGFR and are involved in the activation of MAP kinase signaling pathways. Phosphorylation on Ser and Thr residues is thought to represent a mechanism for attenuation of EGFR kinase activity. EGFR is overexpressed in breast, head and neck cancers, correlating with poor survival. Activating somatic mutations are seen in lung cancer, corresponding to the minority of patients with strong responses to the EGFR inhibitor Iressa (gefitinib). Mutations and amplifications are also seen in glioblastoma, and upregulation is seen in colon cancer and neoplasms. In xenografts, inhibitors synergize with cytotoxic drugs in the inhibition of many tumor types. Inhibitors include: Iressa/ZD1839, Erbitux, Tarceva, and lapatinib. Four alternatively spliced isoforms have been described. Protein type: Kinase, protein; Tumor suppressor; EC 2.7.10.1; Protein kinase, tyrosine (receptor); Protein kinase, TK; Membrane protein, integral; TK group; EGFR family Chromosomal Location of Human Ortholog: 7p12 Cellular Component: extracellular space; endoplasmic reticulum membrane; nuclear membrane; cell surface; focal adhesion; basolateral plasma membrane; integral to membrane; lipid raft; Golgi membrane; membrane; perinuclear region of cytoplasm; apical plasma membrane; cytoplasm; plasma membrane; AP-2 adaptor complex; endosome membrane; nucleus; endosome; receptor complex Molecular Function: identical protein binding; epidermal growth factor receptor activity; epidermal growth factor binding; nitric-oxide synthase regulator activity; transmembrane receptor protein tyrosine kinase activity; receptor signaling protein tyrosine kinase activity; protein phosphatase binding; protein kinase binding; integrin binding; actin filament binding; protein binding; enzyme binding; transmembrane receptor activity; MAP kinase kinase kinase activity; protein heterodimerization activity; ubiquitin protein ligase binding; protein-tyrosine kinase activity; double-stranded DNA binding; chromatin binding; glycoprotein binding; ATP binding Biological Process: circadian rhythm; diterpenoid metabolic process; positive regulation of nitric oxide biosynthetic process; activation of MAPKK activity; nerve growth factor receptor signaling pathway; alkanesulfonate metabolic process; protein insertion into membrane; positive regulation of vasodilation; G1/S-specific positive regulation of cyclin-dependent protein kinase activity; positive regulation of MAP kinase activity; positive regulation of fibroblast proliferation; cell-cell adhesion; cell surface receptor linked signal transduction; ovulation cycle; hair follicle development; positive regulation of superoxide release; negative regulation of mitotic cell cycle; positive regulation of DNA repair; fibroblast growth factor receptor signaling pathway; digestive tract morphogenesis; response to osmotic stress; phospholipase C activation; response to hydroxyisoflavone; hydrogen peroxide metabolic process; positive regulation of transcription from RNA polymerase II promoter; response to oxidative stress; regulation of nitric-oxide synthase activity; response to calcium ion; negative regulation of protein catabolic process; positive regulation of epithelial cell proliferation; negative regulation of apoptosis; negative regulation of epidermal growth factor receptor signaling pathway; tongue development; axon guidance; embryonic placenta development; peptidyl-tyrosine phosphorylation; translation; protein amino acid autophosphorylation; positive regulation of smooth muscle cell proliferation; signal transduction; positive regulation of synaptic transmission, glutamatergic; learning and/or memory; salivary gland morphogenesis; positive regulation of cell proliferation; response to stress; regulation of peptidyl-tyrosine phosphorylation; epidermal growth factor receptor signaling pathway; ossification; phosphoinositide-mediated signaling; MAPKKK cascade; liver development; positive regulation of protein kinase B signaling cascade; cell proliferation; cerebral cortex cell migration; calcium-dependent phospholipase A2 activation; positive regulation of vasoconstriction; innate immune response; positive regulation of protein amino acid phosphorylation; astrocyte activation; response to cobalamin; positive regulation of phosphorylation; positive regulation of DNA replication; positive regulation of inflammatory response; lung development; positive regulation of cell migration Disease: Lung Cancer
Research Articles on EGFR	**1.** positivity, but not HER2 positivity, was associated with poor patient outcomes after curative resection of stage II/III gastric cancer.

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