EGFR Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	EGFR, Polyclonal Antibody
Full Product Name	EGFR (Y978) (Epidermal Growth Factor Receptor, Receptor Tyrosine-protein Kinase ErbB-1, Proto-oncogene c-ErbB-1, ERBB1) (MaxLight 650)
Product Gene Name	anti-EGFR antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight650.
Purity/Purification	Purified by Immunoaffinity chromatography.
Specificity	Recognizes human EGFR.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight650 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	69,228 Da
OMIM	131550
3D Structure	ModBase 3D Structure for P00533
Immunogen	Synthetic peptide corresponding to amino acid residues surrounding Y978 of human EGFR (KLH).
Conjugate	MaxLight650
Note	Preservative Free
Product Categories/Family for anti-EGFR antibody	Antibodies; Receptors
Applications Tested/Suitable for anti-EGFR antibody	Western Blot (WB), FLISA
Application Notes for anti-EGFR antibody	WB: 1:50-1:100 FLISA: 1:1,000 Applications are based on unconjugated antibody.
Related Product Information for anti-EGFR antibody	MBS6474572 is an antibody targeting EGFR. Also known as EGFR (Y978) (Epidermal Growth Factor Receptor, Receptor Tyrosine-protein Kinase ErbB-1, Proto-oncogene c-ErbB-1, ERBB1) (MaxLight 650). Reactive in Human. Host: Rabbit.
Product References and Citations for anti-EGFR antibody	1. Aifa, S., et al., Exp. Cell Res. 302(1):108-114 (2005). 2. Adams, T.E., et al., Growth Factors 22(2):89-95 (2004). 3. Ichinose, J., et al., Biochem. Biophys. Res. Commun. 324(3):1143-1149 (2004). 4. Kuribayashi, A., et al., Endocrinology 145(11):4976-4984 (2004). 5. Kapoor, G.S., et al., Mol. Cell. Biol. 24(2):823-836 (2004). 6.Dominik Hartl, et al. J. Biol. Chem., Nov 2008; 283: 33472-33482. (Applications: WB).
Other Notes	Small volumes of anti-EGFR antibody 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
UniProt Primary Accession #	P00533
UniProt Secondary Accession #	O00688; O00732; P06268; Q14225; Q68GS5; Q92795; Q9BZS2; Q9GZX1; Q9H2C9; Q9H3C9; Q9UMD7
UniProt Related Accession #	P00533
GenBank Nucleotide #	NM_005228.4
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; NISBD2
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
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. [provided by RefSeq, Jun 2016]

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.** EGFR gene amplification and mutations are rare in triple-negative breast cancer (TNBC), the latter of no apparent clinical relevance. Surrogate markers of EGFR-related chromosomal aberrations and combined EGFR/p53 IHC phenotypes appear to be associated with favorable prognosis in patients with operable TNBC receiving conventional adjuvant chemotherapy.

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