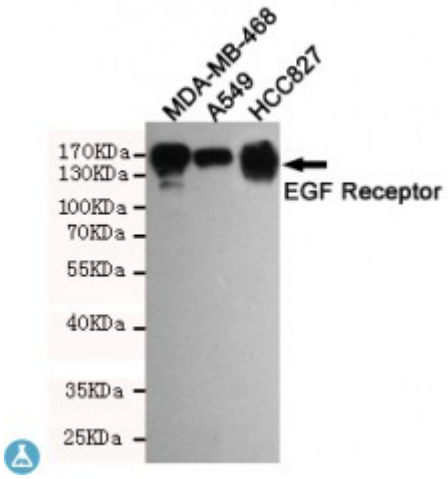
Anti-EGF Receptor antibody



Description	Mouse monoclonal to EGF Receptor.

Model	STJ99228
Host	Mouse
Reactivity	Human
Applications	ELISA, WB
Immunogen	Purified recombinant human EGFR protein fragments expressed in E.coli.
Gene ID	1956
Gene Symbol	EGFR
Dilution range	WB 1:500-2000ELISA 1:10000-20000
Specificity	The antibody detects endogenous level of total EGFR and does not cross-react with related proteins.
Tissue Specificity	Ubiquitously expressed. Isoform 2 is also expressed in ovarian cancers.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Clone ID	3F12-1H7-A10
Note	For Research Use Only (RUO).
Protein Name	Epidermal growth factor receptor Proto-oncogene c-ErbB-1 Receptor tyrosine-protein kinase erbB-1
Molecular Weight	175kDa
Clonality	Monoclonal

Conjugation	Unconjugated
Isotype	IgG1
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:3236OMIM:131550
Alternative Names	Epidermal growth factor receptor Proto-oncogene c-ErbB-1 Receptor tyrosine-protein kinase erbB-1
Function	Receptor tyrosine kinase binding ligands of the EGF family and activating several signaling cascades to convert extracellular cues into appropriate cellular responses. Known ligands include EGF, TGFA/TGF-alpha, amphiregulin, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF. Ligand binding triggers receptor homo- and/or heterodimerization and autophosphorylation on key cytoplasmic residues. The phosphorylated receptor recruits adapter proteins like GRB2 which in turn activates complex downstream signaling cascades. Activates at least 4 major downstream signaling cascades including the RAS-RAF-MEK-ERK, PI3 kinase-AKT, PLCgamma-PKC and STATs modules. May also activate the NF-kappa-B signaling cascade. Also directly phosphorylates other proteins like RGS16, activating its GTPase activity and probably coupling the EGF receptor signaling to the G protein-coupled receptor signaling. Also phosphorylates MUC1 and increases its interaction with SRC and CTNNB1/beta-catenin. Plays a role in enhancing learning and memory performance . Isoform 2 may act as an antagonist of EGF action.; (Microbial infection) Acts as a receptor for hepatitis C virus (HCV) in hepatocytes and facilitates its cell entry. Mediates HCV entry by promoting the formation of the CD81-CLDN1 receptor complexes that are essential for HCV entry and by enhancing membrane fusion of cells expressing HCV envelope glycoproteins.
Cellular Localization	Cell membrane. Single-pass type I membrane protein. Endoplasmic reticulum membrane. Single-pass type I membrane protein. Golgi apparatus membrane. Single-pass type I membrane protein. Nucleus membrane. Single-pass type I membrane protein. Endosome. Endosome membrane. Nucleus. In response to EGF, translocated from the cell membrane to the nucleus via Golgi and ER. Endocytosed upon activation by ligand. Colocalized with GPER1 in the nucleus of estrogen agonist-induced cancer-associated fibroblasts (CAF).. Isoform 2: Secreted.
Post-translational Modifications	Phosphorylation at Ser-695 is partial and occurs only if Thr-693 is phosphorylated. Phosphorylation at Thr-678 and Thr-693 by PRKD1 inhibits EGF-induced MAPK8/JNK1 activation. Dephosphorylation by PTPRJ prevents endocytosis and stabilizes the receptor at the plasma membrane. Autophosphorylation at Tyr-1197 is stimulated by methylation at Arg-1199 and enhances interaction with PTPN6. Autophosphorylation at Tyr-1092 and/or Tyr-1110 recruits STAT3. Dephosphorylated by PTPN1 and PTPN2. Monoubiquitinated and polyubiquitinated upon EGF stimulation; which does not affect tyrosine kinase activity or signaling capacity but may play a role in lysosomal targeting. Polyubiquitin linkage is mainly through 'Lys-63', but linkage through 'Lys-48', 'Lys-11' and 'Lys-29' also occurs. Deubiquitination by OTUD7B prevents degradation. Ubiquitinated by RNF115 and RNF126 .

Methylated. Methylation at Arg-1199 by PRMT5 stimulates phosphorylation at Tyr-1197.