

Phospho-EGFR (Thr678) Rabbit mAb

Catalog # AP74963

Product Information

Application	WB
Primary Accession	P00533
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal Antibody
Calculated MW	134277

Additional Information

Gene ID	1956
Other Names	EGFR
Dilution	WB~~1/500-1/1000
Format	50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

Name	EGFR (HGNC:3236)
Synonyms	ERBB, ERBB1, HER1
Function	Receptor tyrosine kinase binding ligands of the EGF family and activating several signaling cascades to convert extracellular cues into appropriate cellular responses (PubMed: 10805725 , PubMed: 27153536 , PubMed: 2790960 , PubMed: 35538033). Known ligands include EGF, TGFA/TGF- alpha, AREG, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF (PubMed: 12297049 , PubMed: 15611079 , PubMed: 17909029 , PubMed: 20837704 , PubMed: 27153536 , PubMed: 2790960 , PubMed: 7679104 , PubMed: 8144591 , PubMed: 9419975). 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 (PubMed: 27153536). May also activate the NF-kappa-B signaling cascade (PubMed: 11116146). 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 (PubMed:[11602604](#)). Also phosphorylates MUC1 and increases its interaction with SRC and CTNNB1/beta-catenin (PubMed:[11483589](#)). Positively regulates cell migration via interaction with CCDC88A/GIV which retains EGFR at the cell membrane following ligand stimulation, promoting EGFR signaling which triggers cell migration (PubMed:[20462955](#)). Plays a role in enhancing learning and memory performance (By similarity). Plays a role in mammalian pain signaling (long-lasting hypersensitivity) (By similarity).

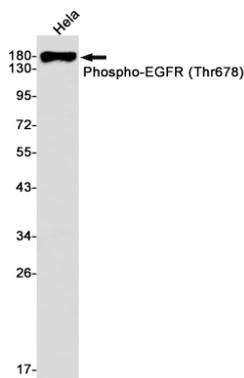
Cellular Location

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. Note=In response to EGF, translocated from the cell membrane to the nucleus via Golgi and ER (PubMed:[17909029](#), PubMed:[20674546](#)). Endocytosed upon activation by ligand (PubMed:[17182860](#), PubMed:[17909029](#), PubMed:[27153536](#), PubMed:[2790960](#)). Colocalized with GPER1 in the nucleus of estrogen agonist-induced cancer-associated fibroblasts (CAF) (PubMed:[20551055](#))

Tissue Location

Ubiquitously expressed. Isoform 2 is also expressed in ovarian cancers.

Images



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