

EGFR Antibody (Y1125) Blocking Peptide
Synthetic peptide
Catalog # BP7628I**Specification****EGFR Antibody (Y1125) Blocking Peptide -
Product Information**Primary Accession [P00533](#)**EGFR Antibody (Y1125) Blocking Peptide -
Additional Information****Gene ID** 1956**Other Names**Epidermal growth factor receptor,
Proto-oncogene c-ErbB-1, Receptor
tyrosine-protein kinase erbB-1, EGFR, ERBB,
ERBB1, HER1**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP7628I](/product/products/AP7628I) was selected from the Y1125 region of human EGFR. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**EGFR Antibody (Y1125) Blocking Peptide -
Protein Information****Name** EGFR ([HGNC:3236](#))**EGFR Antibody (Y1125) Blocking Peptide -
Background**

EGFR is a transmembrane glycoprotein that is a member of a family of protein tyrosine kinases crucial in maintaining a normal balance in cell growth and development. A prototype member of the type 1 receptor tyrosine kinases, EGFR is encoded by the cellular oncogene *cerbB1*. EGFR has an extracellular ligand binding domain, a single transmembrane region, and cytoplasmic domain which is composed of a tyrosine kinase domain and a carboxy terminal domain. The carboxy terminal domain contains at least four tyrosine autophosphorylation sites. Increased production or activation of EGFR has been associated with poor prognosis in a variety of tumors. EGFR overexpression is observed in tumors of the head and neck, brain, bladder, stomach, breast, lung, endometrium, cervix, vulva, ovary, esophagus, stomach and in squamous cell carcinoma.

**EGFR Antibody (Y1125) Blocking Peptide -
References**

Aifa, S., et al., Exp. Cell Res. 302(1):108-114 (2005). Adams, T.E., et al., Growth Factors 22(2):89-95 (2004). Ichinose, J., et al., Biochem. Biophys. Res. Commun. 324(3):1143-1149 (2004). Kuribayashi, A., et al., Endocrinology 145(11):4976-4984 (2004). Kapoor, G.S., et al., Mol. Cell. Biol. 24(2):823-836 (2004).

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:2790960, PubMed:10805725, PubMed:27153536). Known ligands include EGF, TGFA/TGF-alpha, AREG, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF (PubMed:2790960, PubMed:7679104, PubMed:8144591, PubMed:9419975, PubMed:15611079, PubMed:12297049, PubMed:27153536, PubMed:20837704, PubMed:17909029). 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:2790960).

prot.org/citations/27153536" target="_blank">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).

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:20674546, PubMed:17909029). Endocytosed upon activation by ligand (PubMed:2790960, PubMed:17182860, PubMed:27153536, PubMed:17909029). 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.

EGFR Antibody (Y1125) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)