

EGFR Antibody (Y1016) Blocking Peptide
Synthetic peptide
Catalog # BP7628n**Specification**

EGFR Antibody (Y1016) Blocking Peptide - Product InformationPrimary Accession [P00533](#)**EGFR Antibody (Y1016) 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 [AP7628n](/product/products/AP7628n) was selected from the Y1016 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 (Y1016) Blocking Peptide - 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: [2790960](http://www.uniprot.org/citations/2790960), PubMed: [10805725](http://www.uniprot.org/citations/10805725), PubMed: [27153536](http://www.uniprot.org/citations/27153536)). Known ligands include EGF, TGFA/TGF-alpha, AREG, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF (PubMed: [2790960](http://www.uniprot.org/citations/2790960), PubMed: [7679104](http://www.uniprot.org/citations/7679104), PubMed: [8144591](http://www.uniprot.org/citations/8144591))

target="_blank">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: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 CDC88A/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 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 (Y1016) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

EGFR Antibody (Y1016) Blocking Peptide - Images

EGFR Antibody (Y1016) Blocking Peptide - Background

The epidermal growth factor receptor is the cell-surface receptor for members of the epidermal growth factor family (EGF-family) of extracellular protein ligands. The epidermal growth factor receptor is a member of the ErbB family of receptors, a subfamily of four closely related receptor tyrosine kinases: EGFR (ErbB-1), HER2/c-neu (ErbB-2), Her 3 (ErbB-3) and Her 4 (ErbB-4). Mutations affecting EGFR expression or activity could result in cancer.

EGFR Antibody (Y1016) Blocking Peptide - References

Zanardi, T.A., et al., J. Virol. 77(21):11685-11696 (2003).Krug, A.W., et al., J. Biol. Chem. 278(44):43060-43066 (2003).Huang, F., et al., J. Biol. Chem. 278(44):43411-43417 (2003).He, Y.Y., et al., J. Biol. Chem. 278(43):42457-42465 (2003).Hirsch, F.R., et al., J. Clin. Oncol. 21(20):3798-3807 (2003).