

**EGFR Blocking Peptide (N-term)**  
**Synthetic peptide**  
**Catalog # BP19833a****Specification**

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**EGFR Blocking Peptide (N-term) - Product Information**

Primary Accession [P00533](#)  
Other Accession [Q01279](#), [P13387](#), [NP\\_005219.2](#)

**EGFR Blocking Peptide (N-term) - 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 is selected from aa 274-287 of HUMAN EGFR

**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 Blocking Peptide (N-term) - 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:<a href="http://www.uniprot.org/citations/2790960" target="\_blank">2790960</a>, PubMed:<a href="http://www.uniprot.org/citations/10805725" target="\_blank">10805725</a>, PubMed:<a href="http://www.uniprot.org/citations/27153536" target="\_blank">27153536</a>). Known ligands include EGF, TGFA/TGF-alpha, AREG, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin- binding EGF (PubMed:<a href="http://www.uniprot.org/citations/2790960" target="\_blank">2790960</a>, PubMed:<a href="http://www.uniprot.org/citations/7679104" target="\_blank">7679104</a>, PubMed:<a href="http://www.uniprot.org/citations/8144591" target="\_blank">8144591</a>, PubMed:<a href="http://www.uniprot.org/citations/9419975" target="\_blank">9419975</a>, PubMed:<a href="http://www.uniprot.org/citations/15611079" target="\_blank">15611079</a>).

target="\_blank">15611079</a>, PubMed:<a href="http://www.uniprot.org/citations/12297049" target="\_blank">12297049</a>, PubMed:<a href="http://www.uniprot.org/citations/27153536" target="\_blank">27153536</a>, PubMed:<a href="http://www.uniprot.org/citations/20837704" target="\_blank">20837704</a>, PubMed:<a href="http://www.uniprot.org/citations/17909029" target="\_blank">17909029</a>). 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:<a href="http://www.uniprot.org/citations/27153536" target="\_blank">27153536</a>). May also activate the NF-kappa-B signaling cascade (PubMed:<a href="http://www.uniprot.org/citations/11116146" target="\_blank">11116146</a>). 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:<a href="http://www.uniprot.org/citations/11602604" target="\_blank">11602604</a>). Also phosphorylates MUC1 and increases its interaction with SRC and CTNNB1/beta-catenin (PubMed:<a href="http://www.uniprot.org/citations/11483589" target="\_blank">11483589</a>). 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:<a href="http://www.uniprot.org/citations/20462955" target="\_blank">20462955</a>). 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: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 Blocking Peptide (N-term) - Protocols**

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

- [Blocking Peptides](#)

#### **EGFR Blocking Peptide (N-term) - Images**

#### **EGFR Blocking Peptide (N-term) - Background**

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. Multiple alternatively spliced transcript variants that encode different protein isoforms have been found for this gene.

**EGFR Blocking Peptide (N-term) - References**

Abdallah, R.T., et al. J. Biol. Chem. 285(45):35206-35215(2010)  
Lu, C., et al. Mol. Cell. Biol. 30(22):5432-5443(2010)  
Rosell, R., et al. Ann. N. Y. Acad. Sci. 1210, 45-52 (2010) :  
Hata, A., et al. J Thorac Oncol 5(10):1524-1528(2010)  
Aguirre, A., et al. Nature 467(7313):323-327(2010)