10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.622.0609

EGFR-S1026 Blocking Peptide (C-term)

Synthetic peptide
Catalog # BP5436a

Specification

EGFR-S1026 Blocking Peptide (C-term) - Product Information

Primary Accession	P00533
Other Accession	NP_958440.1, NP_005219.2

EGFR-S1026 Blocking Peptide (C-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 1019-1033 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-S1026 Blocking Peptide (C-term) - Protein Information

Name EGFR (HGNC:3236)

Synonyms ERBB, ERBB1, HER1

Function

EGFR-S1026 Blocking Peptide (C-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.

EGFR-S1026 Blocking Peptide (C-term) - References

Perez, C.A., et al. J. Urol. 183(5):2062-2069(2010)
Koumakpayi, I.H., et al. Br. J. Cancer 102(7):1163-1173(2010)
Cortot, A.B., et al. Cancer (2010) In press :
Lee, Y.J., et al. J. Cancer Res. Clin. Oncol. (2010) In press :
Kawahara, A., et al. Hum. Pathol. (2010) In press :
Wu, S.L., et al. Mol. Cell Proteomics 5(9):1610-1627(2006)
Wu, S.L., et al. J. Proteome Res. 4(4):1155-1170(2005)
Abe, Y., et al. J. Biol. Chem. 273(18):11150-11157(1998)
Li, W., et al. Mol. Cell. Biol. 12(12):5824-5833(1992)
Krieg, J., et al. J. Biol. Chem. 267(27):19258-19265(1992)
Lowenstein, E.J., et al. Cell 70(3):431-442(1992)
Chi, D.D., et al. Hum. Mol. Genet. 1 (2), 135 (1992) :
Countaway, J.L., et al. J. Biol. Chem. 267(2):1129-1140(1992)

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: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-S1026 Blocking Peptide (C-term) - Protocols

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

- Blocking Peptides