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Phospho-ERBB2(S1113) Blocking Peptide

Synthetic peptide
Catalog # BP3844a

Specification

Phospho-ERBB2(S1113) Blocking Peptide - Product Information

Primary Accession	P04626
Other Accession	NP_001005862.1

Phospho-ERBB2(S1113) Blocking Peptide - Additional Information

Gene ID 2064

Other Names
Receptor tyrosine-protein kinase erbB-2, Metastatic lymph node gene 19 protein, MLN 19, Proto-oncogene Neu, Proto-oncogene c-ErbB-2, Tyrosine kinase-type cell surface receptor HER2, p185erbB2, CD340, ERBB2, HER2, MLN19, NEU, NGL

Target/Specificity
The synthetic peptide sequence is selected from aa 1106-1119 of HUMAN ERBB2

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.

Phospho-ERBB2(S1113) Blocking Peptide - Protein Information

Name ERBB2

Synonyms HER2, MLN19, NEU, NGL

Phospho-ERBB2(S1113) Blocking Peptide - Background

This gene encodes a member of the epidermal growth factor (EGF) receptor family of receptor tyrosine kinases. This protein has no ligand binding domain of its own and therefore cannot bind growth factors. However, it does bind tightly to other ligand-bound EGF receptor family members to form a heterodimer, stabilizing ligand binding and enhancing kinase-mediated activation of downstream signalling pathways, such as those involving mitogen-activated protein kinase and phosphatidylinositol-3 kinase. Allelic variations at amino acid positions 654 and 655 of isoform a (positions 624 and 625 of isoform b) have been reported, with the most common allele, Ile654/Ile655, shown here. Amplification and/or overexpression of this gene has been reported in numerous cancers, including breast and ovarian tumors. Alternative splicing results in several additional transcript variants, some encoding different isoforms and others that have not been fully characterized.

Phospho-ERBB2(S1113) Blocking Peptide - References

Geradts, J., et al. Cancer Invest. 28(9):969-977(2010)
Zaoui, K., et al. Proc. Natl. Acad. Sci. U.S.A. 107(43):18517-18522(2010)
Oliveras, G., et al. Ann. N. Y. Acad. Sci. 1210, 86-92 (2010) :
Han, J.S., et al. Anticancer Res. 30(9):3407-3412(2010)
Stackievicz, R., et al. Isr. Med. Assoc. J. 12(5):290-295(2010)

Function
Protein tyrosine kinase that is part of several cell surface receptor complexes, but that apparently needs a coreceptor for ligand binding. Essential component of a neuregulin-receptor complex, although neuregulins do not interact with it alone. GP30 is a potential ligand for this receptor. Regulates outgrowth and stabilization of peripheral microtubules (MTs). Upon ERBB2 activation, the MEMO1-RHOA-DIAPH1 signaling pathway elicits the phosphorylation and thus the inhibition of GSK3B at cell membrane. This prevents the phosphorylation of APC and CLASP2, allowing its association with the cell membrane. In turn, membrane-bound APC allows the localization of MACF1 to the cell membrane, which is required for microtubule capture and stabilization.

Cellular Location
[Isoform 1]: Cell membrane; Single-pass type I membrane protein Early endosome. Cytoplasm, perinuclear region. Nucleus. Note=Translocation to the nucleus requires endocytosis, probably endosomal sorting and is mediated by importin beta-1/KPNB1. Also detected in VPS35-positive endosome-to-TGN retrograde vesicles (PubMed:31138794). [Isoform 3]: Cytoplasm. Nucleus.

Tissue Location
Expressed in a variety of tumor tissues including primary breast tumors and tumors from small bowel, esophagus, kidney and mouth.

Phospho-ERBB2(S1113) Blocking Peptide - Protocols

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

- Blocking Peptides