Phospho-Erbb2(y1112) Antibody Blocking Peptide

PRODUCT OVERVIEW

Product Name	ErbB2 (Y1112), Blocking Peptide
Full Product Name	Phospho-ErbB2(Y1112) Antibody Blocking peptide
Product Gene Name	ERBB2 blocking peptide
Product Synonym Gene Name	HER2; MLN19; NEU; NGL
Product Synonym 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
Form/Format	The synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml deionized water for a final concentration of 1 mg/ml.
Specificity	The synthetic peptide sequence used to generate the antibody was selected from the region of human Phospho-ErbB2-Y1112. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	ErbB2 (Y1112) peptide (MBS9225016) is used for blocking the activity of ErbB2 (Y1112) antibody (MBS9204680)
Molecular Weight	97,382 Da
OMIM	137215
Cellular Location	Isoform 1: Cell membrane; Single-pass type I membrane protein. Cytoplasm, perinuclear region. Nucleus Note: Translocation to the nucleus requires endocytosis, probably endosomal sorting and is mediated by importin beta-1/KPNB1 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.
Related Product Information for ERBB2 blocking peptide	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.
Other Notes	Small volumes of ERBB2 blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for ERBB2 purchase	MBS9225016 is a blocking peptide targeting ERBB2. Also known as Phospho-ErbB2(Y1112) Antibody Blocking peptide.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ERBB2. It may not necessarily be applicable to this product.

NCBI GI #	119533
NCBI GeneID	2064
NCBI Accession #	P04626.1

UniProt Primary Accession #	P04626
UniProt Secondary Accession #	Q14256; Q6LDV1; Q9UMK4; B2RZG3; B4DHN3; X5D2V5
UniProt Related Accession #	P04626
NCBI Official Full Name	Receptor tyrosine-protein kinase erbB-2
NCBI Official Synonym Full Names	erb-b2 receptor tyrosine kinase 2
NCBI Official Symbol	ERBB2
NCBI Official Synonym Symbols	NEU; NGL; HER2; TKR1; CD340; HER-2; MLN 19; HER-2/neu
UniProt Protein Name	Receptor tyrosine-protein kinase erbB-2
UniProt Synonym Protein Names	Metastatic lymph node gene 19 protein; MLN 19; Proto-oncogene Neu; Proto-oncogene c-ErbB-2; Tyrosine kinase-type cell surface receptor HER2; p185erbB2; CD_antigen: CD340
Protein Family	Receptor tyrosine-protein kinase
UniProt Gene Name	ERBB2
UniProt Synonym Gene Names	HER2; MLN19; NEU; NGL; MLN 19
UniProt Entry Name	ERBB2_HUMAN
NCBI Protein Information	receptor tyrosine-protein kinase erbB-2
NCBI Summary for ERBB2	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. [provided by RefSeq, Jul 2008]

UniProt Comments for ERBB2	HER2: a proto-oncogenic receptor tyrosine kinase of the EGFR family. Essential component of a neuregulin-receptor complex, although neuregulins do not interact with it alone. Not activated by EGF, TGF- alpha and amphiregulin. Amplified in breast cancer. Overexpression induces constitutive activity, and the gene is amplified or overexpressed in up to 30% of breast cancers, correlating with poor survival. The antibody Herceptin is approved for treatment of metastatic breast cancer with HER2 amplification/overexpression. Somatic mutations seen in 4% of lung cancers and also in breast, gastric, ovarian cancer and glioblastoma. One SNP shows predisposition to breast and gastric cancer. Inhibitors: Herceptin, lapatinib, PKI-166, EKB-569, CI-1033. Protein type: Protein kinase, tyrosine (receptor); Protein kinase, TK; Membrane protein, integral; EC 2.7.10.1; Oncoprotein; Kinase, protein; TK group; EGFR family Chromosomal Location of Human Ortholog: 17q12 Cellular Component: basolateral plasma membrane; cytoplasm; endosome membrane; nucleus; plasma membrane; receptor complex Molecular Function: ErbB-3 class receptor binding; growth factor binding; identical protein binding; phosphatidylinositol-4,5-bisphosphate 3-kinase activity; protein binding; protein C-terminus binding; protein heterodimerization activity; protein phosphatase binding; protein-tyrosine kinase activity; Ras guanyl-nucleotide exchange factor activity; transmembrane receptor activity; transmembrane receptor protein tyrosine kinase activity Biological Process: cell proliferation; cell surface receptor linked signal transduction; enzyme linked receptor protein signaling pathway; MAPKKK cascade; phosphoinositide 3-kinase cascade; phosphoinositide-mediated signaling; positive regulation of cell adhesion; positive regulation of cell growth; positive regulation of epithelial cell proliferation; positive regulation of GTPase activity; positive regulation of MAP kinase activity; positive regulation of protein amino acid phosphorylation; positive regulation of transcription from RNA polymerase I promoter; positive regulation of transcription from RNA polymerase III promoter; positive regulation of translation; protein amino acid autophosphorylation; protein amino acid phosphorylation; regulation of microtubule-based process; regulation of phosphoinositide 3-kinase cascade; signal transduction; transmembrane receptor protein tyrosine kinase signaling pathway; wound healing Disease: Gastric Cancer; Glioma Susceptibility 1; Lung Cancer
Research Articles on ERBB2	**1.** Her2 expression in in locally advanced gastric cancer with extensive lymph node metastasis
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