Phospho-Mouse Kit(s739) Antibody Blocking Peptide

PRODUCT OVERVIEW

Product Name	KIT (S739), Blocking Peptide
Full Product Name	Phospho-mouse KIT(S739) Antibody Blocking peptide
Product Gene Name	Kit blocking peptide
Product Synonym Gene Name	Sl
Product Synonym Names	Mast/stem cell growth factor receptor Kit; SCFR; Proto-oncogene c-Kit; Tyrosine-protein kinase Kit; CD117; Kit; Sl
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 1 mg/ml.
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	KIT (S739) peptide (MBS9225296) is used for blocking the activity of KIT (S739) antibody (MBS9213806)
Molecular Weight	22,814 Da
Cellular Location	Isoform 1: Cell membrane; Single-pass type I membrane protein Isoform 3: Cytoplasm. Note: Detected in the cytoplasm of spermatozoa, especially in the equatorial and subacrosomal region of the sperm head.
Tissue Location	Isoform 1 and isoform 2 are detected in bone marrow cells, spermatogonia and spermatocytes, but not in round spermatids, elongating spermatids and spermatozoa. Isoform 3 is detected in round spermatids, elongating spermatids and spermatozoa, but not in spermatogonia and spermatocytes (at protein level). Isoform 1 is widely expressed and detected in fetal liver and bone marrow. Isoform 3 is detected in bone marrow cells enriched in hematopoietic stem cells
Related Product Information for Kit blocking peptide	Tyrosine-protein kinase that acts as cell-surface receptor for the cytokine KITLG/SCF and plays an essential role in the regulation of cell survival and proliferation, hematopoiesis, stem cell maintenance, gametogenesis, mast cell development, migration and function, and in melanogenesis. In response to KITLG/SCF binding, KIT can activate several signaling pathways. Phosphorylates PIK3R1, PLCG1, SH2B2/APS and CBL. Activates the AKT1 signaling pathway by phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase. Activated KIT also transmits signals via GRB2 and activation of RAS, RAF1 and the MAP kinases MAPK1/ERK2 and/or MAPK3/ERK1. Promotes activation of STAT family members STAT1, STAT3, STAT5A and STAT5B. Activation of PLCG1 leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate. KIT signaling is modulated by protein phosphatases, and by rapid internalization and degradation of the receptor. Activated KIT promotes phosphorylation of the protein phosphatases PTPN6/SHP-1 and PTPRU, and of the transcription factors STAT1, STAT3, STAT5A and STAT5B. Promotes phosphorylation of PIK3R1, CBL, CRK (isoform Crk-II), LYN, MAPK1/ERK2 and/or MAPK3/ERK1, PLCG1, SRC and SHC1.
Other Notes	Small volumes of Kit 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 Kit purchase	MBS9225296 is a blocking peptide targeting Kit. Also known as Phospho-mouse KIT(S739) Antibody Blocking peptide.

ADDITIONAL DETAILS

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

NCBI GI #	353526329
NCBI GeneID	16590
NCBI Accession #	P05532.3

UniProt Primary Accession #	P05532
UniProt Secondary Accession #	Q61415; Q61416; Q61417; Q6LEE9; Q6QJB7; Q6QJB8; Q7TS86; Q8C8K9
UniProt Related Accession #	P05532
NCBI Official Full Name	Mast/stem cell growth factor receptor Kit
NCBI Official Synonym Full Names	kit oncogene
NCBI Official Symbol	Kit
NCBI Official Synonym Symbols	W; Bs; Fdc; Ssm; SCO1; SCO5; SOW3; CD117; c-KIT; Tr-kit; Gsfsco1; Gsfsco5; Gsfsow3
UniProt Protein Name	Mast/stem cell growth factor receptor Kit
UniProt Synonym Protein Names	Proto-oncogene c-Kit; Tyrosine-protein kinase Kit; CD_antigen: CD117
Protein Family	Mast/stem cell growth factor receptor
UniProt Gene Name	Kit
UniProt Synonym Gene Names	Sl; SCFR
UniProt Entry Name	KIT_MOUSE
NCBI Protein Information	mast/stem cell growth factor receptor Kit
NCBI Summary for Kit	The c-Kit proto-oncogene is the cellular homolog of the transforming gene of a feline retrovirus (v-Kit). The c-kit protein includes characteristics of a protein kinase transmembrane receptor. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

UniProt Comments for Kit	Kit: a receptor tyrosine kinase and a member of the subfamily that includes PDGF, CSF-1 and FLT-3/flk-2 receptors. Receptor for stem cell factor. Plays a critical role in hematopoietic stem cell, mast cell, melanocyte and germ cell development. Ligand binding induces autophosphorylation, dimerization and activation, leading to the recruitment and phosphorylation of downstream SH2-containing signaling components including PLC-gamma, PI3 kinase p85, SHP2 and CrkL, linking c-Kit to various cell signaling pathways. Molecular lesions that impair the kinase activity of c-Kit are associated with a variety of developmental disorders, while mutations that constitutively activate c-Kit can lead to hyperplasia and tumorigenesis. Activating mutations cause >90% of gastrointestinal stromal tumors (GIST); successfully treated with inhibitors Gleevec (imatinib, Glivec) and Sutent (Sutinib, SU11248). Activating mutations also induce mastocytosis. Autocrine/paracrine stimulation may drive some lung and other tumors. Loss of expression associated with melanoma progression. Familial loss of function mutations cause piebaldism, with defects in hair and skin pigmentation due to lack of melanocytes. Protein type: Membrane protein, integral; Protein kinase, tyrosine (receptor); Kinase, protein; EC 2.7.10.1; Oncoprotein; Protein kinase, TK; TK group; PDGFR family Cellular Component: acrosome; cell surface; cytoplasm; external side of plasma membrane; extracellular space; intercellular junction; internal side of plasma membrane Molecular Function: cytokine binding; protease binding; protein binding; protein homodimerization activity; protein-tyrosine kinase activity; stem cell factor receptor activity; transmembrane receptor protein tyrosine kinase activity Biological Process: actin cytoskeleton reorganization; activation of MAPK activity; cell differentiation; chemotaxis; cytokine and chemokine mediated signaling pathway; dendritic cell cytokine production; detection of mechanical stimulus involved in sensory perception of sound; embryonic hemopoiesis; epithelial cell proliferation; erythrocyte differentiation; germ cell development; germ cell migration; germ cell programmed cell death; glycosphingolipid metabolic process; gut development; hemopoiesis; immature B cell differentiation; inflammatory response; lamellipodium biogenesis; lymphoid progenitor cell differentiation; mast cell chemotaxis; mast cell cytokine production; mast cell degranulation; melanocyte differentiation; myeloid leukocyte differentiation; myeloid progenitor cell differentiation; negative regulation of programmed cell death; ovarian follicle development; peptidyl-tyrosine phosphorylation; pigmentation; pigmentation during development; positive regulation of cell migration; positive regulation of cell proliferation; positive regulation of JAK-STAT cascade; positive regulation of long-term neuronal synaptic plasticity; positive regulation of MAP kinase activity; positive regulation of MAPKKK cascade; positive regulation of Notch signaling pathway; positive regulation of pseudopodium formation; positive regulation of transcription factor activity; positive regulation of tyrosine phosphorylation of Stat1 protein; positive regulation of tyrosine phosphorylation of Stat3 protein; positive regulation of tyrosine phosphorylation of Stat5 protein; protein amino acid autophosphorylation; protein amino acid phosphorylation; regulation of cell shape; regulation of pigmentation during development; response to radiation; somatic stem cell division; somatic stem cell maintenance; spermatid development; spermatogenesis; stem cell differentiation; T cell differentiation; visual learning
Research Articles on Kit	**1.** House dust mite allergens mediate the activation of ckit in dendritic cells via Tolllike receptor 2.
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