Phospho-Kit(y553) Antibody Blocking Peptide

PRODUCT OVERVIEW

Product Name	KIT (Y553), Blocking Peptide
Full Product Name	Phospho-KIT(Y553) Antibody Blocking peptide
Product Gene Name	KIT blocking peptide
Product Synonym Gene Name	SCFR
Product Synonym Names	Mast/stem cell growth factor receptor Kit; SCFR; Piebald trait protein; PBT; Proto-oncogene c-Kit; Tyrosine-protein kinase Kit; p145 c-kit; v-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog; CD117; KIT; SCFR
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 (Y553) peptide (MBS9225324) is used for blocking the activity of KIT (Y553) antibody (MBS9205331)
Molecular Weight	46,658 Da
OMIM	164920
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 spermatogonia and Leydig cells. Isoform 3 is detected in round spermatids, elongating spermatids and spermatozoa (at protein level). Widely expressed. Detected in the hematopoietic system, the gastrointestinal system, in melanocytes and in germ 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	MBS9225324 is a blocking peptide targeting KIT. Also known as Phospho-KIT(Y553) 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 #	125472
NCBI GeneID	3815
NCBI Accession #	P10721.1
UniProt Primary Accession #	P10721

UniProt Secondary Accession #	Q6IQ28; Q99662; Q9UM99; B5A956; D5LXN2; D5M931; F5H8F8
UniProt Related Accession #	P10721
NCBI Official Full Name	Mast/stem cell growth factor receptor Kit
NCBI Official Synonym Full Names	KIT proto-oncogene receptor tyrosine kinase
NCBI Official Symbol	KIT
NCBI Official Synonym Symbols	PBT; SCFR; C-Kit; CD117
UniProt Protein Name	Mast/stem cell growth factor receptor Kit
UniProt Synonym Protein Names	Piebald trait protein; PBT; Proto-oncogene c-Kit; Tyrosine-protein kinase Kit; p145 c-kit; v-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog; CD_antigen: CD117
Protein Family	Mast/stem cell growth factor receptor
UniProt Gene Name	KIT
UniProt Synonym Gene Names	SCFR; SCFR; PBT
UniProt Entry Name	KIT_HUMAN
NCBI Protein Information	mast/stem cell growth factor receptor Kit
NCBI Summary for KIT	This gene encodes the human homolog of the proto-oncogene c-kit. C-kit was first identified as the cellular homolog of the feline sarcoma viral oncogene v-kit. This protein is a type 3 transmembrane receptor for MGF (mast cell growth factor, also known as stem cell factor). Mutations in this gene are associated with gastrointestinal stromal tumors, mast cell disease, acute myelogenous lukemia, and piebaldism. Multiple 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: Kinase, protein; Protein kinase, TK; Oncoprotein; Protein kinase, tyrosine (receptor); Membrane protein, integral; EC 2.7.10.1; TK group; PDGFR family Chromosomal Location of Human Ortholog: 4q12 Cellular Component: extracellular space; plasma membrane Molecular Function: cytokine binding; phosphatidylinositol-4,5-bisphosphate 3-kinase activity; protein binding; protein homodimerization activity; protein-tyrosine kinase activity; Ras guanyl-nucleotide exchange factor activity; transmembrane receptor protein tyrosine kinase activity Biological Process: actin cytoskeleton reorganization; activation of MAPK activity; cytokine and chemokine mediated signaling pathway; dendritic cell cytokine production; detection of mechanical stimulus involved in sensory perception of sound; embryonic hemopoiesis; erythrocyte differentiation; gut development; hemopoiesis; immature B cell differentiation; inflammatory response; lamellipodium biogenesis; male gonad development; MAPKKK cascade; mast cell chemotaxis; mast cell cytokine production; mast cell degranulation; melanocyte differentiation; ovarian follicle development; peptidyl-tyrosine phosphorylation; phosphoinositide-mediated signaling; pigmentation; positive regulation of JAK-STAT cascade; positive regulation of MAPKKK cascade; positive regulation of phosphoinositide 3-kinase activity; positive regulation of phosphoinositide 3-kinase cascade; 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; regulation of cell proliferation; regulation of cell shape; regulation of phosphoinositide 3-kinase cascade; signal transduction; spermatogenesis; stem cell differentiation; stem cell maintenance; T cell differentiation Disease: Gastrointestinal Stromal Tumor; Mast Cell Disease; Piebald Trait; Testicular Germ Cell Tumor
Research Articles on KIT	**1.** Aberrant c-KIT and DOG-1 expressions in CRC are rare events, either in NMA or MA.
Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
Disclaimer	While every efforts were made to ensure the accuracy of the information provided in this datasheet, MyBioSource will not be liable for any omissions or errors contained herein. MyBioSource reserves the right to make changes to this datasheet at any time without prior notice. It is the responsibility of the customer to report product performance issues to MyBioSource within 30 days of receipt of the product. Please visit our Terms & Conditions page for more information.
Product Note	Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details.

For Research Use Only. Not for use in diagnostic or therapeutic procedures.

MyBioSource | Tel: +1.858.633.0165 | Fax: +1.858.633.0166 | mybiosource.com/contact-us
Online datasheet: https://www.mybiosource.com/blocking-peptide/kit-y553/9225324