KIT Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	KIT, Polyclonal Antibody
Full Product Name	KIT, Phosphorylated (Y553) (KIT, SCFR, Mast/stem cell growth factor receptor Kit, Piebald trait protein, Proto-oncogene c-Kit, Tyrosine-protein kinase Kit, p145 c-kit, v-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog, CD117) (Azide free) (HRP
Product Gene Name	anti-KIT antibody
Product Synonym Names	KIT; SCFR; Mast/stem cell growth factor receptor Kit; Piebald trait protein; Proto-oncogene c-Kit; Tyrosine-protein kinase Kit; p145 c-kit; v-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog; CD117
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Horseradish Peroxidase (HRP).
Purity/Purification	Purified by Protein A Affinity Chromatography.
Preparation and Storage	Store product at 4 degree C if to be used immediately within two weeks. For long-term storage, aliquot to avoid repeated freezing and thawing and store at -20 degree C. Aliquots are stable at -20 degree C for 12 months after receipt. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Note: Sodium azide is a potent inhibitor of peroxidase and should not be added to HRP conjugates. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.
Molecular Weight	109,865 Da
Chromosome Location	Chromosome: 4; NC_000004.11 (55524095..55606881). Location: 4q11-q12
OMIM	164920
3D Structure	ModBase 3D Structure for P10721
Immunogen	KIT Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding Y553 of human KIT.
Conjugate	HRP
Antigen Modification	Phosphorylated
Note	Preservative Free
Product Categories/Family for anti-KIT antibody	Antibodies; CD Markers
Applications Tested/Suitable for anti-KIT antibody	ELISA (EIA), Dot Blot (DB)
Application Notes for anti-KIT antibody	ELISA: 1:1,000 Applications are based on unconjugated antibody.
Related Product Information for anti-KIT antibody	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.

Product References and Citations for anti-KIT antibody	Molderings, G.J., et al. Immunogenetics 62 (11-12), 721-727 (2010): Cheng, M., et al. Circ. Res. 107(9):1083-1093(2010). Chi, P., et al. Nature 467(7317):849-853(2010). Rossi, S., et al. Am. J. Surg. Pathol. 34(10):1480-1491(2010). Chen, P., et al. World J. Gastroenterol. 16(33):4227-4232(2010).
Other Notes	Small volumes of anti-KIT antibody 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	MBS6313769 is an antibody targeting KIT. Also known as KIT, Phosphorylated (Y553) (KIT, SCFR, Mast/stem cell growth factor receptor Kit, Piebald trait protein, Proto-oncogene c-Kit, Tyrosine-protein kinase Kit, p145 c-kit, v-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog, CD117) (Azide free) (HRP. Reactive in Human. Host: Rabbit.



Dot Blot (DB) of anti-KIT antibody
Dot blot analysis of KIT Antibody (Phospho Y553) Phospho-specific Pab on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.6ug per ml.

ADDITIONAL DETAILS

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

NCBI GI #	4557695
NCBI GeneID	3815
NCBI Accession #	NP_000213.1
UniProt Primary Accession #	P10721
UniProt Secondary Accession #	Q6IQ28; Q99662; Q9UM99; B5A956; D5LXN2; D5M931; F5H8F8
UniProt Related Accession #	P10721
GenBank Nucleotide #	NM_000222.2
NCBI Official Full Name	mast/stem cell growth factor receptor Kit isoform 1
NCBI Official Synonym Full Names	v-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog
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
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; p145 c-kit; proto-oncogene c-Kit; piebald trait protein; soluble KIT variant 1; tyrosine-protein kinase Kit; proto-oncogene tyrosine-protein kinase Kit; v-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene-like
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; Kinase, protein; Protein kinase, TK; Oncoprotein; EC 2.7.10.1; Protein kinase, tyrosine (receptor); TK group; PDGFR family Chromosomal Location of Human Ortholog: 4q12 Cellular Component: extracellular space; internal side of plasma membrane; mast cell granule; acrosome; plasma membrane; integral to membrane; intercellular junction; external side of plasma membrane Molecular Function: protein binding; protein homodimerization activity; protease binding; metal ion binding; protein-tyrosine kinase activity; cytokine binding; stem cell factor receptor activity; receptor signaling protein tyrosine kinase activity; transmembrane receptor protein tyrosine kinase activity; ATP binding Biological Process: nerve growth factor receptor signaling pathway; activation of MAPK activity; somatic stem cell maintenance; germ cell programmed cell death; positive regulation of JAK-STAT cascade; lymphoid progenitor cell differentiation; positive regulation of long-term neuronal synaptic plasticity; positive regulation of tyrosine phosphorylation of Stat3 protein; regulation of cell shape; epithelial cell proliferation; germ cell migration; erythrocyte differentiation; somatic stem cell division; T cell differentiation; fibroblast growth factor receptor signaling pathway; embryonic hemopoiesis; mast cell chemotaxis; stem cell differentiation; detection of mechanical stimulus involved in sensory perception of sound; positive regulation of phosphoinositide 3-kinase cascade; positive regulation of tyrosine phosphorylation of Stat1 protein; immature B cell differentiation; positive regulation of transcription factor activity; regulation of pigmentation during development; glycosphingolipid metabolic process; mast cell cytokine production; peptidyl-tyrosine phosphorylation; protein amino acid autophosphorylation; signal transduction; myeloid progenitor cell differentiation; ovarian follicle development; positive regulation of MAPKKK cascade; positive regulation of cell proliferation; melanocyte differentiation; negative regulation of programmed cell death; visual learning; hemopoiesis; inflammatory response; positive regulation of Notch signaling pathway; epidermal growth factor receptor signaling pathway; lamellipodium biogenesis; phosphoinositide-mediated signaling; dendritic cell cytokine production; cytokine and chemokine mediated signaling pathway; male gonad development; stem cell maintenance; positive regulation of phosphoinositide 3-kinase activity; mast cell degranulation; regulation of cell proliferation; positive regulation of pseudopodium formation; gut development; positive regulation of tyrosine phosphorylation of Stat5 protein; pigmentation; actin cytoskeleton reorganization; innate immune response; spermatogenesis; spermatid development; positive regulation of cell migration Disease: Gastrointestinal Stromal Tumor; Mast Cell Disease; Piebald Trait; Testicular Germ Cell Tumor
Research Articles on KIT	**1.** These data suggest that KIT and PDGFRA mutations and standardized mitotic count deserve to be investigated to evaluate the relapse risk of Gastrointestinal stromal tumors
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