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C-Kit Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1095a

Product Information

Application	WB, IHC, E
Primary Accession	P10721
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	8D7
Isotype	IgG1
Calculated MW	109865
Description	C-kit (CD117, 145kDa) functions as a tyrosine kinase receptor which becomes activated upon binding of its ligand SCF (stem-cell factor), the C-kit gene encodes the human homolog of the proto-oncogene c-kit. which was first identified as the cellular homolog of the feline sarcoma viral oncogene v-kit. KIT is a type 3 transmembrane receptor for MGF (mast cell growth factor). Mutations in KIT are associated with gastrointestinal stromal tumors, mast cell disease, acute myelogenous lukemia, and piebaldism.
Immunogen	Purified recombinant fragment of C-kit expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	3815
Other Names	Mast/stem cell growth factor receptor Kit, SCFR, 2.7.10.1, 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
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	C-Kit Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	KIT

Synonyms	SCFR
Function	Tyrosine-protein kinase that acts as a 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.
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 3]: In testis, detected in spermatogonia in the basal layer and in interstitial Leydig cells but not in Sertoli cells or spermatocytes inside the seminiferous tubules (at protein level) (PubMed:20601678). Expression is maintained in ejaculated spermatozoa (at protein level) (PubMed:20601678)

References

1. Mojica WD et.alHistopathology. 2005 Nov;47(5):517-22. 2. Tong WD et.alInt J Colorectal Dis. 2005 Jul;20(4):363-7. Epub 2005 Feb 2. 3. Nakai Y et.alBiochem Biophys Res Commun. 2005 Nov 11;337(1):289-96.

Images

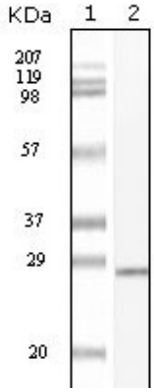
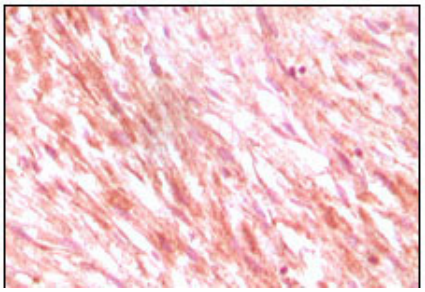


Figure 1: Western blot analysis using C-kit mouse mAb against truncated C-kit recombinant protein.

Figure 2: Immunohistochemical analysis of paraffin-embedded maligant mesenchymoma tissues, showing cytoplasmic localization using C-kit mouse mAb with DAB staining.



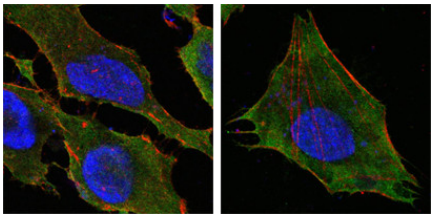


Figure 3: Confocal immunofluorescence analysis of Hela (left) and L-02 (right) cells using anti-S100A10/P11 mAb (green). Red: Actin filaments have been labeled with DY-554 phalloidin. Blue: DRAQ5 fluorescent DNA dye.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.