

C-Kit Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1095a**Specification**

C-Kit Antibody - Product Information

Application	WB, IHC, E
Primary Accession	P10721
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	145kDa KDa

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 leukemia, and piebaldism.

Immunogen

Purified recombinant fragment of C-kit expressed in E. Coli.

Formulation

Ascitic fluid containing 0.03% sodium azide.

C-Kit Antibody - 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.

C-Kit Antibody - 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

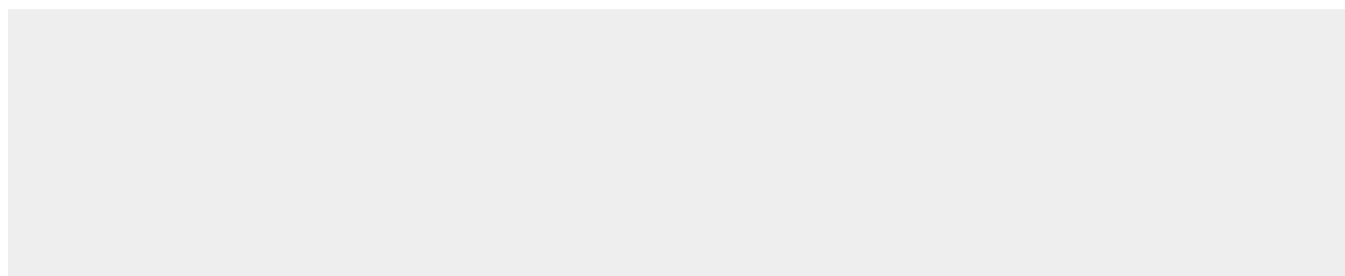
[Isoform 3]: In testis, detected in spermatogonia in the basal layer and in interstitial Leydig cells but not in Sertoli cells or spermatocytes inside the seminiferous tubules (at protein level) (PubMed:20601678). Expression is maintained in ejaculated spermatozoa (at protein level) (PubMed:20601678)

C-Kit Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

C-Kit Antibody - Images



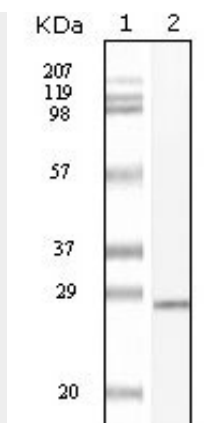


Figure 1: Western blot analysis using C-kit mouse mAb against truncated C-kit recombinant protein.

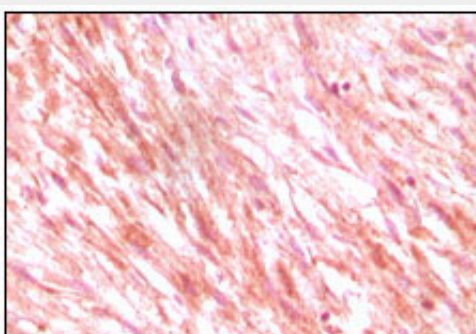


Figure 2: Immunohistochemical analysis of paraffin-embedded malignant mesenchymoma tissues, showing cytoplasmic localization using C-kit mouse mAb with DAB staining.

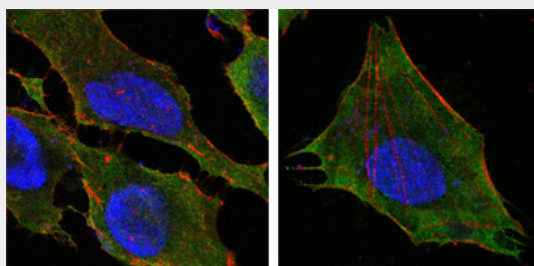


Figure 3: Confocal immunofluorescence analysis of Hela (left) and L-02 (right) cells using anti-S100A10/P11 mAb (green). Red: Actin filaments have been labeled with DY-554 phalloidin. Blue: DRAQ5 fluorescent DNA dye.

C-Kit Antibody - 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.