10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

KIT Antibody (N-term D121)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7656e

Product Information

Application	FC, WB, IHC-P, E
Primary Accession	P10721
Other Accession	Q99662
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB15297
Calculated MW	109865
Antigen Region	106-135

Additional Information

Gene ID	3815
Other 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
Target/Specificity	This KIT antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 106-135 amino acids from the N-terminal region of human KIT.
Dilution	FC~~1:10~50 WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	KIT Antibody (N-term D121) 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)

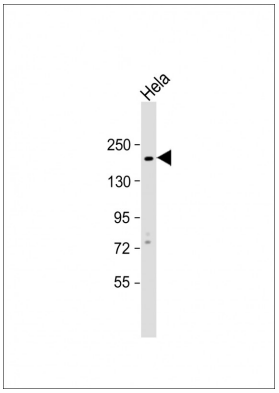
Background

KIT is 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. KIT is a type 3 transmembrane receptor for MGF (mast cell growth factor, also known as stem cell factor). Mutations in KIT are associated with gastrointestinal stromal tumors, mast cell disease, acute myelogenous lukemia, and piebaldism.

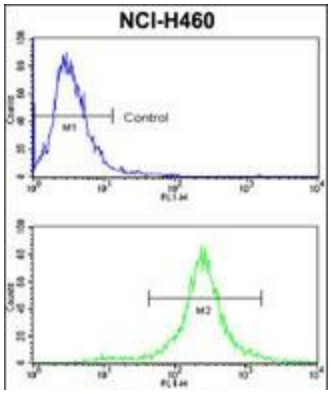
References

Wardelmann, E., et al., Int. J. Cancer 106(6):887-895 (2003). Lennartsson, J., et al., Exp. Cell Res. 288(1):110-118 (2003). Sakuma, Y., et al., Cancer Sci 94(6):486-491 (2003). Araki, K., et al., Lung Cancer 40(2):173-180 (2003). Voytyuk, O., et al., J. Biol. Chem. 278(11):9159-9166 (2003).

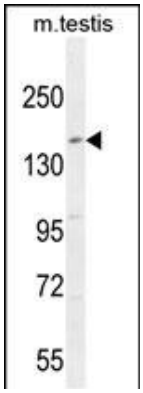
Images



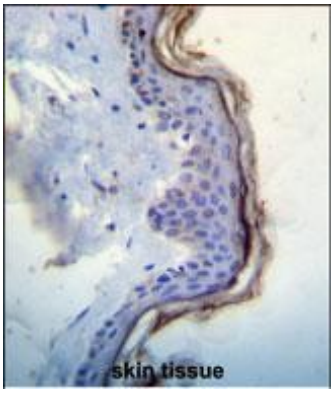
Anti-KIT Antibody (N-term D121) at 1:1000 dilution + Hela whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 110 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



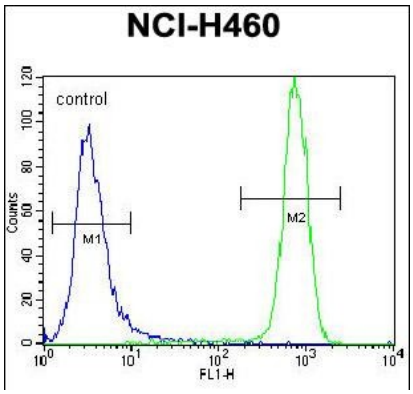
Flow cytometric analysis of NCI-H460 cells using KIT Antibody (N-term D121)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



KIT Antibody (N-term D121) (Cat.#AP7656e) western blot analysis in mouse testis tissue lysates (35ug/lane).This demonstrates the KIT antibody detected the KIT protein (arrow).



KIT Antibody (N-term D121) (Cat. #AP7656e)immunohistochemistry analysis in formalin fixed and paraffin embedded human skin tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of KIT Antibody (N-term D121) for immunohistochemistry. Clinical relevance has not been evaluated.



KIT Antibody (N-term D121) (Cat. #AP7656e) flow cytometric analysis of NCI-H460 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.