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FLT3 Antibody

Catalog # ASC11544

Product Information

Application	WB, IF, E
Primary Accession	P36888
Other Accession	NP_004110, 121114304
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	112903
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	FLT3 antibody can be used for detection of FLT3 by Western blot at 1 - 2 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	2322
Other Names	Receptor-type tyrosine-protein kinase FLT3, 2.7.10.1, FL cytokine receptor, Fetal liver kinase-2, FLK-2, Fms-like tyrosine kinase 3, FLT-3, Stem cell tyrosine kinase 1, STK-1, CD135, FLT3, CD135, FLK2, STK1
Target/Specificity	FLT3; At least three isoforms of FLT3 are known to exist; this antibody will detect all isoforms.
Reconstitution & Storage	FLT3 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	FLT3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	FLT3
Synonyms	CD135, FLK2, STK1
Function	Tyrosine-protein kinase that acts as a cell-surface receptor for the cytokine FLT3LG and regulates differentiation, proliferation and survival of hematopoietic progenitor cells and of dendritic cells. Promotes phosphorylation of SHC1 and AKT1, and activation of the downstream effector MTOR. Promotes activation of RAS signaling and phosphorylation of downstream kinases, including MAPK1/ERK2 and/or MAPK3/ERK1. Promotes

	phosphorylation of FES, FER, PTPN6/SHP, PTPN11/SHP-2, PLCG1, and STAT5A and/or STAT5B. Activation of wild-type FLT3 causes only marginal activation of STAT5A or STAT5B. Mutations that cause constitutive kinase activity promote cell proliferation and resistance to apoptosis via the activation of multiple signaling pathways.
Cellular Location	Membrane; Single-pass type I membrane protein. Endoplasmic reticulum lumen. Note=Constitutively activated mutant forms with internal tandem duplications are less efficiently transported to the cell surface and a significant proportion is retained in an immature form in the endoplasmic reticulum lumen. The activated kinase is rapidly targeted for degradation
Tissue Location	Detected in bone marrow, in hematopoietic stem cells, in myeloid progenitor cells and in granulocyte/macrophage progenitor cells (at protein level). Detected in bone marrow, liver, thymus, spleen and lymph node, and at low levels in kidney and pancreas. Highly expressed in T-cell leukemia

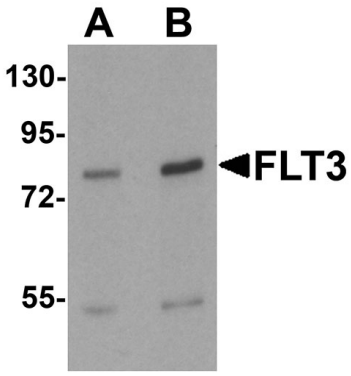
Background

FLT3 Antibody: FLT3 is a member of the class III receptor tyrosine kinase family and its internal tandem duplication (ITD) is preferentially seen in acute myeloid leukemia and myelodysplastic syndrome among various hematological malignancies. It is a membrane bound glycosylated protein that is expressed primarily in early hematopoietic progenitor cells. Upon binding its ligand FL, FLT3 activates multiple signaling pathways including the PI3K/Akt and Ras/MEK/MAPK pathways. In cells expressing FLT3-ITD, these pathways are constitutively on, resulting in abnormal cell growth and anti-apoptotic activity.

References

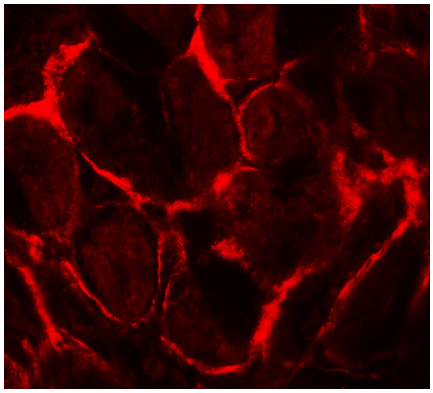
Rosnet O, Schiff C, Pebusque MJ, et al. Human FLT3/FLK2 gene: cDNA cloning and expression in hematopoietic cells. Blood 1993; 82:1110-9
Yokoa S, Kiyoi H, Nakao M, et al. Internal tandem duplication of the FLT3 gene is preferentially seen in acute myeloid leukemia and myelodysplastic syndrome among various hematological malignancies. Leukemia 1997; 11:1605-9.
Takahashi S. Downstream molecular pathways of FLT3 in the pathogenesis of acute myeloid leukemia: biology and therapeutic implications. J. Hematol. and Oncol. 2011; 4:13.

Images



Western blot analysis of FLT3 in 3T3 cell lysate with FLT3 antibody at (A) 1 and (B)2 µg/mL.

Immunofluorescence of FLT3 in human kidney tissue with FLT3 antibody at 20 µg/mL.



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