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

FLT3 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1810a

Product Information

Application	WB, IHC, E
Primary Accession	P36888
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	7B7C3
Isotype	IgG1
Calculated MW	112903
Description	This gene encodes a class III receptor tyrosine kinase that regulates hematopoiesis. The receptor consists of an extracellular domain composed of five immunoglobulin-like domains, one transmembrane region, and a cytoplasmic kinase domain split into two parts by a kinase-insert domain. The receptor is activated by binding of the fms-related tyrosine kinase 3 ligand to the extracellular domain, which induces homodimer formation in the plasma membrane leading to autophosphorylation of the receptor. The activated receptor kinase subsequently phosphorylates and activates multiple cytoplasmic effector molecules in pathways involved in apoptosis, proliferation, and differentiation of hematopoietic cells in bone marrow. Mutations that result in the constitutive activation of this receptor result in acute myeloid leukemia and acute lymphoblastic leukemia.
Immunogen	Purified recombinant fragment of human FLT3 (AA: 930-991) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

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
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 E~~1/10000
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	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

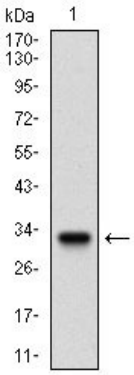
This gene encodes a class III receptor tyrosine kinase that regulates hematopoiesis. The receptor consists of an extracellular domain composed of five immunoglobulin-like domains, one transmembrane region, and a cytoplasmic kinase domain split into two parts by a kinase-insert domain. The receptor is activated by binding of the fms-related tyrosine kinase 3 ligand to the extracellular domain, which induces homodimer formation in the plasma membrane leading to autophosphorylation of the receptor. The activated receptor kinase subsequently phosphorylates and activates multiple cytoplasmic effector molecules in pathways involved in apoptosis, proliferation, and differentiation of hematopoietic cells in bone marrow. Mutations that result in the constitutive activation of this receptor result in acute myeloid leukemia and acute lymphoblastic leukemia. ;

References

1. J Immunol. 2012 Oct 15;189(8):3822-30. 2. Cancer. 2012 Dec 15;118(24):6110-7.

Images

Figure 1: Western blot analysis using FLT3 mAb against human FLT3 recombinant protein. (Expected MW is 32.6 kDa)



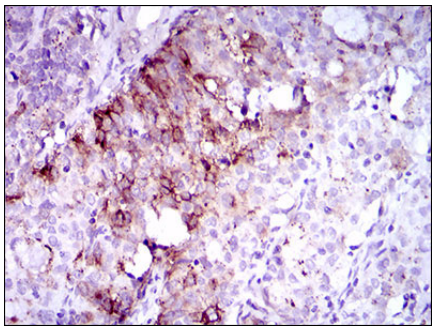


Figure 2: Immunohistochemical analysis of paraffin-embedded cervical cancer tissues using FLT3 mouse mAb with DAB staining.

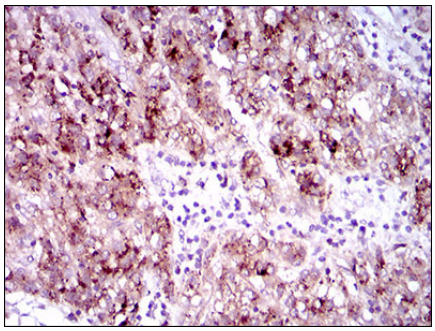


Figure 3: Immunohistochemical analysis of paraffin-embedded liver cancer tissues using FLT3 mouse mAb with DAB staining.