

Flt-3/Flk-2 (M-20): sc-340

BACKGROUND

Stem cell tyrosine kinase (STK-1) has been cloned from a CD34⁺ hematopoietic stem cell enriched library and identified as the human homolog of a previously identified gene of mouse origin designated either Flk-2 or Flt-3. The STK-1 cDNA encodes a protein of 993 amino acids with 85% identity to Flt-3/Flk-2. STK-1 is a member of the type III receptor tyrosine kinase family that includes Kit (steel factor receptor), Fms and PDGF. STK-1 expression in blood and marrow is restricted to CD34⁺ cells, a population greatly enriched for hematopoietic stem/progenitor cells. STK-1 antiserum recognizes two polypeptides in these cells. The mouse homolog of STK-1, designated Flt-3/Flk-2, is expressed at high levels in hematopoietic cells and also in neural, gonadal, hepatic and placental tissues. It has been suggested that STK-1 and its murine homolog Flt-3/Flk-2 may function as growth factor receptors on hematopoietic stem and/or progenitor cells.

REFERENCES

1. Matthews, W., et al. 1991. A receptor tyrosine kinase specific to hematopoietic stem and progenitor cell-enriched populations. *Cell* 65: 1143-1152.
2. Rosnet, O., et al. 1991. Isolation and chromosomal localization of a novel Fms-like tyrosine kinase gene. *Genomics* 9: 380-385.
3. Rosnet, O., et al. 1991. Murine Flt-3, a gene encoding a novel tyrosine kinase receptor of the PDGFR/CSF1R family. *Oncogene* 6: 1641-1650.
4. Lyman, S.D., et al. 1993. Characterization of the protein encoded by the Flt-3 (Flk-2) receptor-like tyrosine kinase gene. *Oncogene* 8: 815-822.
5. Maroc, N., et al. 1993. Biochemical characterization and analysis of the transforming potential of the Flt-3/Flk-2 receptor tyrosine kinase. *Oncogene* 8: 909-918.

CHROMOSOMAL LOCATION

Genetic locus: Flt3 (mouse) mapping to 5 G3.

SOURCE

Flt-3/Flk-2 (M-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of Flt-3/Flk-2 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-340 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

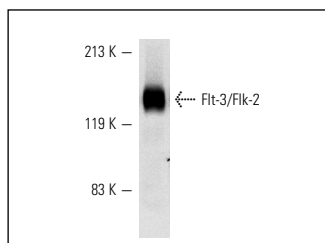
Flt-3/Flk-2 (M-20) is recommended for detection of Flt-3/Flk-2 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Flt-3/Flk-2 siRNA (m): sc-35396, Flt-3/Flk-2 shRNA Plasmid (m): sc-35396-SH and Flt-3/Flk-2 shRNA (m) Lentiviral Particles: sc-35396-V.

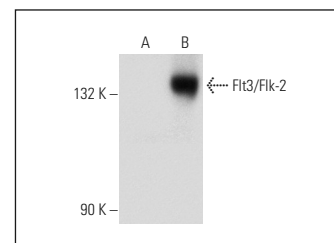
Molecular Weight of Flt-3/Flk-2: 160/130 kDa.

Positive Controls: Flt-3/Flk-2 (m): 293T Lysate: sc-178618, mouse brain extract: sc-2253 or rat brain extract: sc-2392.

DATA



Flt-3/Flk-2 (M-20): sc-340. Western blot analysis of Flt-3/Flk-2 expression in mouse brain extract.



Flt-3/Flk-2 (M-20): sc-340. Western blot analysis of Flt-3/Flk-2 expression in non-transfected: sc-117752 (A) and mouse Flt-3/Flk-2 transfected: sc-178618 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Omori, M., et al. 1996. Coexpression of Flt-3 ligand/Flt-3 and SCF/c-Kit signal transduction systems in bile-duct-ligated SI and W mice. *Am. J. Pathol.* 150: 1179-1187.
2. Biancone, L., et al. 2004. Role of L-Selectin in the vascular homing of peripheral blood-derived endothelial progenitor cells. *J. Immunol.* 173: 5268-5274.
3. Palmqvist, L., et al. 2006. The Flt-3 receptor tyrosine kinase collaborates with Nup98-Hox fusions in acute myeloid leukemia. *Blood* 108: 1030-1036.
4. Morgado, E., et al. 2007. Flt-3 is dispensable to the HoxA9/Meis1 leukemogenic cooperation. *Blood* 109: 4020-4022.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

MONOS
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Try **Flt-3/Flk-2 (8H5): sc-101343**, our highly recommended monoclonal alternative to Flt-3/Flk-2 (M-20).