

Flt-3/Flk-2 (m): 293T Lysate: sc-178618

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., Jordan, C.T., Wiegand, G.W., Pardoll, D. and Lemischka, I.R. 1991. A receptor tyrosine kinase specific to hematopoietic stem and progenitor cell-enriched populations. *Cell* 65: 1143-1152.
2. Rosnet, O., Mattei, M.G., Marchetto, S. and Birnbaum, D. 1991. Isolation and chromosomal localization of a novel fms-like tyrosine kinase gene. *Genomics* 9: 380-385.
3. Rosnet, O., Marchetto, S., deLapeyriere, O. and Birnbaum, D. 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., James, L., Zappone, J., Sleath, P.R., Beckmann, M.P. and Bird, T. 1993. Characterization of the protein encoded by the FLT3 (FLK2) receptor-like tyrosine kinase gene. *Oncogene* 8: 815-822.
5. Maroc, N., Rottapel, R., Rosnet, O., Marchetto, S., Lavezzi, C., Mannoni, P., Birnbaum, D. and Dubreuil, P. 1993. Biochemical characterization and analysis of the transforming potential of the FLT3/FLK2 receptor tyrosine kinase. *Oncogene* 8: 909-918.
6. Small, D., Levenstein, M., Kim, E., Carow, C., Amin, S., Rockwell, P., Witte, L., Burrow, C., Ratajczak, M.Z., Gewirtz, A.M. and Civin, C.I. 1994. STK-1, the human homolog of Flk-2/Flt-3, is selectively expressed in CD34⁺ human bone marrow cells and is involved in the proliferation of early progenitor/stem cells. *Proc. Natl. Acad. Sci. USA* 91: 459-463.

CHROMOSOMAL LOCATION

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

PRODUCT

Flt-3/Flk-2 (m): 293T Lysate represents a lysate of mouse Flt-3/Flk-2 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

Flt-3/Flk-2 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Flt-3/Flk-2 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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

PROTOCOLS

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