

VEGFR1 (m): 293T Lysate: sc-120291

BACKGROUND

Three cell membrane receptor tyrosine kinases, Flt-1 (also designated VEGF-R1), Flk-1 (also designated VEGF-R2) and Flt-4, putatively involved in the growth of endothelial cells, are characterized by the presence of seven immunoglobulin-like sequences in their extracellular domain. These receptors exhibit high degrees of sequence relatedness to each other as well as lesser degrees of relatedness to the class III receptors including CSF-1/Fms, PDGR, SLFR/Kit and Flt-3/Flk-2. Two members of this receptor class, Flt-1 and Flk-1, have been shown to represent high affinity receptors for vascular endothelial growth factors (VEGFs). On the basis of structural similarity to Flt-1 and Flk-1, it has been speculated that Flt-4 might represent a third receptor for either VEGF or a VEGF-related ligand.

REFERENCES

1. Shibuya, M., Yamaguchi, S., Yamane, A., Ikeda, T., Tojo, A., Matsushime, H. and Sato, M. 1990. Nucleotide sequence and expression of a novel human receptor-type tyrosine kinase gene (Flt) closely related to the Fms family. *Oncogene* 5: 519-524.
2. Matthews, W., Jordan, C.T., Gavin, M., Jenkins, N.A., Copeland, N.G. and Lemischka, I.R. 1991. A receptor tyrosine kinase cDNA isolated from a population of enriched primitive hematopoietic cells and exhibiting close genetic linkage to c-Kit. *Proc. Natl. Acad. Sci. USA* 88: 9026-9030.
3. De Vries, C., Escobedo, J.A., Ueno, H., Houck, K., Ferrara, N. and Williams, L.T. 1992. The Fms-like tyrosine kinase, a receptor for vascular endothelial growth factor. *Science* 255: 989-991.
4. Peters, K.G., De Vries, C. and Williams, L.T. 1993. Vascular endothelial growth factor receptor expression during embryogenesis and tissue repair suggests a role in endothelial differentiation and blood vessel growth. *Proc. Natl. Acad. Sci. USA* 90: 8915-8919.
5. Millauer, B., Witzmann-Voos, S., Schnürch, H., Martinez, R., Moller, N.P.H., Risau, W. and Ullrich, A. 1993. High affinity VEGF binding and developmental expression suggest Flk-1 as a major regulator of vasculogenesis and angiogenesis. *Cell* 72: 835-846.
6. Oelrichs, R.B., Reid, H.H., Bernard, O., Ziemiecki, A. and Wilks, A.F. 1993. NYK/Flk-1: a putative receptor protein tyrosine kinase isolated from E10 embryonic neuroepithelium is expressed in endo-thelial cells of the developing embryo. *Oncogene* 8: 11-18.
7. Galland, F., Karamysheva, A., Pebusque, M., Borg, J., Rottapel, R., Dubreuil, P., Rosnet, O. and Birnbaum, D. 1993. The Flt4 gene encodes a transmembrane tyrosine kinase related to the vascular endothelial growth factor receptor. *Oncogene* 8: 1233-1240.

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.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Flt1 (mouse) mapping to 5 G3.

PRODUCT

VEGFR1 (m): 293T Lysate represents a lysate of mouse VEGFR1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

VEGFR1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive VEGFR1 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.