



VEGFR2 (931-997): sc-4059 WB

BACKGROUND

Three cell membrane receptor tyrosine kinases, Flt (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 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., Wizigmann-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 endothelial 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.

SOURCE

VEGFR2 (931-997) is expressed in *E. coli* as a 31 kDa tagged fusion protein corresponding to amino acids 931-997 mapping at an insert domain of VEGFR2 of mouse origin.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

PRODUCT

VEGFR2 (931-997) is purified from bacterial lysates (> 98%) by glutathione agarose affinity chromatography; supplied as 10 µg in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

VEGFR2 (931-997) is suitable as a Western blotting control.

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.