SANTA CRUZ BIOTECHNOLOGY, INC.

Flk-1 (1158-1345): sc-4058 WB

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 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

Flk-1 (1158-1345) is expressed in *E. coli* as a 43 kDa tagged fusion protein corresponding to amino acids 1158-1345 mapping at the C-terminal domain of Flk-1 of mouse origin.

Storage

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

PRODUCT

Flk-1 (1158-1345) is purified from bacterial lysates (> 98%) by glutathione agarose affinity chromatography; supplied as 10 µg in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

Flk-1 (1158-1345) is suitable as a Western blotting control for sc-6251.

RESEARCH USE

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