SANTA CRUZ BIOTECHNOLOGY, INC.

Flt-1 (AP-MAB0702): sc-101445

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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., et al. 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., et al. 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., et al. 1992. The Fms-like tyrosine kinase, a receptor for vascular endothelial growth factor. Science 255: 989-991.
4. Peters, K.G., et al. 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., et al. 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., et al. 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., et al. 1993. The FLT4 gene encodes a transmembrane tyrosine kinase related to the vascular endothelial growth factor receptor. Oncogene 8: 1233-1240.

CHROMOSOMAL LOCATION

Genetic locus: FLT1 (human) mapping to 13q12.2; Flt1 (mouse) mapping to 5 G.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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

SOURCE

Flt-1 (AP-MAB0702) is a mouse monoclonal antibody raised against the extracellular domain of Flt-1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available azide-free for blocking, sc-101445 L, 100 µg/0.1 ml.

APPLICATIONS

Flt-1 (AP-MAB0702) is recommended for detection of Flt-1 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Suitable for use as control antibody for Flt-1 siRNA (h): sc-29319 and Flt-1 siRNA (m): sc-35395.

Molecular Weight of Flt-1: 180 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.