

Flt-1 (SF-2): sc-74008

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

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- De Vries, C., et al. 1992. The Fms-like tyrosine kinase, a receptor for vascular endothelial growth factor. *Science* 255: 989-991.
- 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.
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- 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.
- 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 (mouse) mapping to 5 G.

SOURCE

Flt-1 (SF-2) is a rat monoclonal antibody raised against an extracellular domain of Flt-1 of mouse origin.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

PRODUCT

Each vial contains 100 µg IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and protein stabilizer.

APPLICATIONS

Flt-1 (SF-2) is recommended for detection of Flt-1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1 µg per 1 x 10⁶ cells); non cross-reactive with Flt-4 or Flk-1.

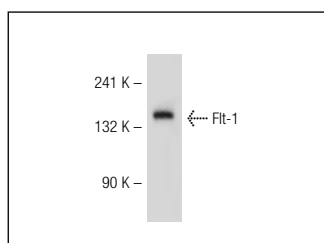
Molecular Weight of Flt-1: 180 kDa.

Positive Controls: mouse embryo tissue extract.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rat IgG-HRP: sc-2006 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-rat IgG-HRP: sc-2032 (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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Flt-1 (SF-2): sc-74008. Western blot analysis of Flt-1 expression in A-10 whole cell lysate.

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.