

Flk-1 (C-20): sc-315

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.

CHROMOSOMAL LOCATION

Genetic locus: Kdr (mouse) mapping to 5 C3.3.

SOURCE

Flk-1 (C-20) is available as either rabbit (sc-315) or goat (sc-315-G) polyclonal affinity purified antibody raised against a peptide mapping at the C-terminus of Flk-1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-315 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-315 AC, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

Flk-1 (C-20) is recommended for detection of Flk-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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Flk-1 siRNA (m): sc-35390, Flk-1 shRNA Plasmid (m): sc-35390-SH and Flk-1 shRNA (m) Lentiviral Particles: sc-35390-V.

Molecular Weight of immature Flk-1: 150 kDa.

Molecular Weight of intermediate glycosylated Flk-1: 200 kDa.

Molecular Weight of mature glycosylated Flk-1: 230 kDa.

Positive Controls: Flk-1 (m): 293T Lysate: sc-120289 or mouse liver extract: sc-2256 or c4 whole cell lysate: sc-364186.

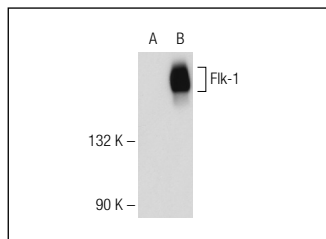
RESEARCH USE

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

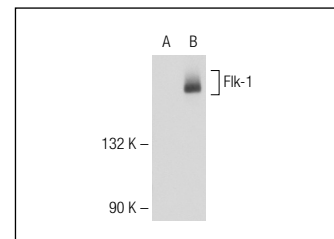
STORAGE

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

DATA



Flk-1 (C-20): sc-315. Western blot analysis of Flk-1 expression in non-transfected: sc-117752 (A) and mouse Flk-1 transfected: sc-120289 (B) 293T whole cell lysates.



Flk-1 (C-20)-G: sc-315-G. Western blot analysis of Flk-1 expression in non-transfected: sc-117752 (A) and mouse Flk-1 transfected: sc-120289 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Mandriota, S.J., et al. 1996. Transforming growth factor β 1 down-regulates vascular endothelial growth factor receptor 2/Flk-1 expression in vascular endothelial cells. *J. Biol. Chem.* 271: 11500-11505.
- Berard, M., et al. 1996. Vascular endothelial growth factor confers a growth advantage *in vitro* and *in vivo* to stromal cells cultured from neonatal hemangiomas. *Am. J. Pathol.* 150: 1315-1326.
- Klein, D., et al. 2008. Wnt2 acts as a cell type-specific, autocrine growth factor in rat hepatic sinusoidal endothelial cells cross-stimulating the VEGF pathway. *Hepatology* 47: 1018-1031.
- Behm, C.Z., et al. 2008. Molecular imaging of endothelial vascular cell adhesion molecule-1 expression and inflammatory cell recruitment during vasculogenesis and ischemia-mediated arteriogenesis. *Circulation* 117: 2902-2911.
- Reidy, K.J., et al. 2009. Semaphorin3a regulates endothelial cell number and podocyte differentiation during glomerular development. *Development* 136: 3979-3989.
- Kusama-Eguchi, K., et al. 2010. Hind-limb paraparesis in a rat model for neuropathy associated with apoptosis and an impaired vascular endothelial growth factor system in the spinal cord. *J. Comp. Neurol.* 518: 928-942.
- Veron, D., et al. 2010. Overexpression of VEGF-A in podocytes of adult mice causes glomerular disease. *Kidney Int.* 77: 989-999.



Try **Flk-1 (D-8): sc-393163** or **Flk-1 (A-3): sc-6251**, our highly recommended monoclonal alternatives to Flk-1 (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Flk-1 (D-8): sc-393163**.