

Flk-1 (Q-20): sc-19530

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 (human) mapping to 4q12; Kdr (mouse) mapping to 5 C3.3.

SOURCE

Flk-1 (Q-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of Flk-1 of human 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-19530 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Flk-1 (Q-20) is recommended for detection of Flk-1 of human and, to a lesser extent, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Flk-1 (Q-20) is also recommended for detection of Flk-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Flk-1 siRNA (h): sc-29318, Flk-1 siRNA (m): sc-35390, Flk-1 shRNA Plasmid (h): sc-29318-SH, Flk-1 shRNA Plasmid (m): sc-35390-SH, Flk-1 shRNA (h) Lentiviral Particles: sc-29318-V 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: ECV304 cell lysate: sc-2269 or c4 whole cell lysate: sc-364186.

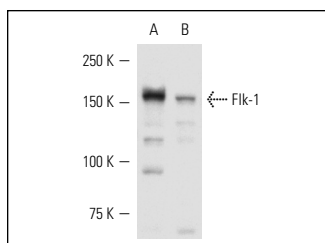
STORAGE

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.

DATA



Flk-1 (Q-20): sc-19530. Western blot analysis of Flk-1 expression in ECV304 (A) and c4 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Glasker, S., et al. 2006. Hemangioblastomas share protein expression with embryonal hemangioblast progenitor cell. *Cancer Res.* 66: 4167-4172.
- Dedkov, E.I., et al. 2006. Compensatory growth of coronary arterioles in postinfarcted heart: regional differences in DNA synthesis and growth factor/receptor expression patterns. *Am. J. Physiol. Heart Circ. Physiol.* 291: H1686-H1693.
- Greenberg, J.I., et al. 2008. A role for VEGF as a negative regulator of pericyte function and vessel maturation. *Nature* 456: 809-813.
- Alonso, V., et al. 2008. Parathyroid hormone-related protein (107-139) increases human osteoblastic cell survival by activation of vascular endothelial growth factor receptor-2. *J. Cell. Physiol.* 217: 717-727.
- Kusumbe, A.P., et al. 2009. CD133-expressing stem cells associated with ovarian metastases establish an endothelial hierarchy and contribute to tumor vasculature. *Stem Cells* 27: 498-508.
- Hata, Y., et al. 2010. Antiangiogenic mechanisms of simvastatin in retinal endothelial cells. *Graefes Arch. Clin. Exp. Ophthalmol.* 248: 667-673.
- Abir, R., et al. 2010. Vascular endothelial growth factor A and its two receptors in human preantral follicles from fetuses, girls, and women. *Fertil. Steril.* 93: 2337-2347.
- Tran, E.D., et al. 2011. Matrix metalloproteinase activity causes VEGFR-2 cleavage and microvascular rarefaction in rat mesentery. *Microcirculation* 18: 228-237.
- Chung, T.W., et al. 2013. CAPE suppresses VEGFR-2 activation, and tumor neovascularization and growth. *J. Mol. Med.* 91: 271-282.



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