

# Flk-1 (N-931): sc-505

## 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 (N-931) is a rabbit polyclonal antibody raised against amino acids 931-997 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.

## APPLICATIONS

Flk-1 (N-931) is recommended for detection of Flk-1 of mouse, rat and human 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 (N-931) 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, rat liver extract: sc-2395 or mouse liver extract: sc-2256.

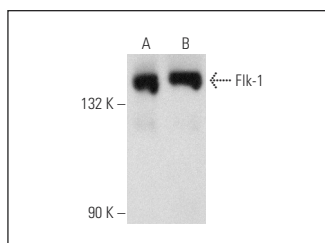
## STORAGE

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 (N-931): sc-505. Western blot analysis of Flk-1 expression in mouse liver (A) and rat liver (B) tissue extracts.

## SELECT PRODUCT CITATIONS

1. Patterson, C., et al. 1996. Downregulation of vascular endothelial growth factor receptors by tumor necrosis factor- $\alpha$  in cultured human vascular endothelial cells. *J. Clin. Invest.* 98: 490-496.
2. Pennisi, D.J. and Mikawa, T. 2005. Normal patterning of the coronary capillary plexus is dependent on the correct transmural gradient of FGF expression in the myocardium. *Dev. Biol.* 279: 378-390.
3. Gaudio, E., et al. 2006. Administration of r-VEGF-A prevents hepatic artery ligation-induced bile duct damage in bile duct ligated rats. *Am. J. Physiol. Gastrointest. Liver Physiol.* 291: G307-G317.
4. Liu, Y., et al. 2006. Membrane ganglioside enrichment lowers the threshold for vascular endothelial cell angiogenic signaling. *Cancer Res.* 66: 10408-10414.
5. Mura, M., et al. 2006. The early responses of VEGF and its receptors during acute lung injury: implication of VEGF in alveolar epithelial cell survival. *Crit. Care* 10: R130.
6. Burt, L.E., et al. 2007. Renal vascular endothelial growth factor in neonatal obstructive nephropathy. I. Endogenous VEGF. *Am. J. Physiol. Renal Physiol.* 292: F158-F167.
7. Postek, A., et al. 2007. Expression of VEGF-A, Flt-1, and Flk-1 in the arterial endothelial cells of the uterine broad ligament throughout the estrous cycle. *Cell Tissue Res.* 330: 313-319.
8. Barkefors, I., et al. 2011. Exocyst complex component 3-like 2 (EXOC3L2) associates with the exocyst complex and mediates directional migration of endothelial cells. *J. Biol. Chem.* 286: 24189-24199.



Try **Flk-1 (D-8): sc-393163** or **Flk-1 (A-3): sc-6251**, our highly recommended monoclonal alternatives to Flk-1 (N-931). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **Flk-1 (D-8): sc-393163**.