

VEGFR2 (F-10): sc-393179

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

VEGFR2 (F-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1292-1321 at the C-terminus of VEGFR2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-393179 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

VEGFR2 (F-10) is recommended for detection of VEGFR2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

VEGFR2 (F-10) is also recommended for detection of VEGFR2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for VEGFR2 siRNA (h): sc-29318, VEGFR2 siRNA (m): sc-35390, VEGFR2 shRNA Plasmid (h): sc-29318-SH, VEGFR2 shRNA Plasmid (m): sc-35390-SH, VEGFR2 shRNA (h) Lentiviral Particles: sc-29318-V and VEGFR2 shRNA (m) Lentiviral Particles: sc-35390-V.

Molecular Weight of immature VEGFR2: 150 kDa.

Molecular Weight of intermediate glycosylated VEGFR2: 200 kDa.

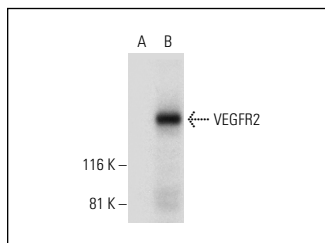
Molecular Weight of mature glycosylated VEGFR2: 230 kDa.

Positive Controls: VEGFR2 (m): 293T Lysate: sc-120289.

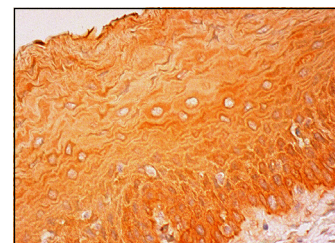
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



VEGFR2 (F-10): sc-393179. Western blot analysis of VEGFR2 expression in non-transfected: sc-117752 (A) and mouse VEGFR2 transfected: sc-120289 (B) 293T whole cell lysates.



VEGFR2 (F-10): sc-393179. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing cytoplasmic staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

- Xu, J., et al. 2016. Endothelial-like cells differentiated from mesenchymal stem cells attenuate neointimal hyperplasia after vascular injury. *Mol. Med. Rep.* 14: 4830-4836.
- Mousavi, S.A., et al. 2019. Receptor-mediated endocytosis of VEGF-A in rat liver sinusoidal endothelial cells. *Biomed Res. Int.* 2019: 5496197.
- Mansoori, B., et al. 2020. Overexpression of HMGA2 in breast cancer promotes cell proliferation, migration, invasion and stemness. *Expert Opin. Ther. Targets* 24: 255-265.
- Gudenschwager-Basso, E.K., et al. 2022. Characterization of the expression of angiogenic factors in cutaneous squamous cell carcinoma of domestic cats. *Vet. Sci.* 9: 375.

STORAGE

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



See **VEGFR2 (D-8): sc-393163** for VEGFR2 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.