SANTA CRUZ BIOTECHNOLOGY, INC.

VEGFR2 (D-8): sc-393163

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

REFERENCES

1. Shibuya, M., et al. 1990. Nucleotide sequence and expression of a novel human receptor-type tyrosine kinase gene (Flt) closely related to the Fms family. Oncogene 5: 519-524.
2. Matthews, W., et al. 1991. A receptor tyrosine kinase cDNA isolated from a population of enriched primitive hematopoietic cells and exhibiting close genetic linkage to c-Kit. Proc. Natl. Acad. Sci. USA 88: 9026-9030.
3. De Vries, C., et al. 1992. The Fms-like tyrosine kinase, a receptor for vascular endothelial growth factor. Science 255: 989-991.

CHROMOSOMAL LOCATION

Genetic locus: KDR (human) mapping to 4q12; Kdr (mouse) mapping to 5 C3.3.

SOURCE

VEGFR2 (D-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1282-1321 at the C-terminus of VEGFR2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

VEGFR2 (D-8) is available conjugated to agarose (sc-393163 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393163 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393163 PE), fluorescein (sc-393163 FITC), Alexa Fluor® 488 (sc-393163 AF488), Alexa Fluor® 546 (sc-393163 AF546), Alexa Fluor® 594 (sc-393163 AF594) or Alexa Fluor® 647 (sc-393163 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393163 AF680) or Alexa Fluor® 790 (sc-393163 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393163 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

VEGFR2 (D-8) 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 (D-8) 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.

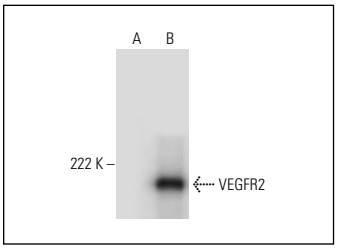
Molecular Weight of immature VEGFR2: 150 kDa.

Molecular Weight of intermediate glycosylated VEGFR2: 200 kDa.

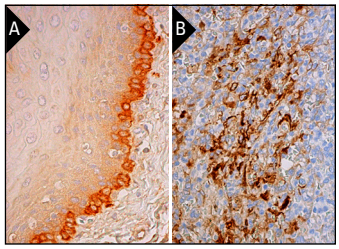
Molecular Weight of mature glycosylated VEGFR2: 230 kDa.

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

DATA



VEGFR2 (D-8): sc-393163. Western blot analysis of VEGFR2 expression in non-transfected: sc-117752 (**A**) and mouse VEGFR2 transfected: sc-120289 (**B**) 293T whole cell lysates.



VEGFR2 (D-8): sc-393163. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing membrane and cytoplasmic staining of basal layer of squamous epithelial cells (**A**) and human spleen tissue showing cytoplasmic staining of subset of cells in red pulp and membrane and cytoplasmic staining of endothelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Hein, T.W., et al. 2015. VEGF receptor-2-linked PI3K/Calpain/SIRT1 activation mediates retinal arteriolar dilations to VEGF and shear stress. Invest. Ophthalmol. Vis. Sci. 56: 5381-5389.
2. Chen, Q., et al. 2020. Possible role of EphA4 and VEGFR2 interactions in neural stem and progenitor cell differentiation. Exp. Ther. Med. 19: 1789-1796.
3. Chen, D., et al. 2021. Visfatin promotes angiogenesis of RF/6A cells through upregulation of VEGF/VEGFR-2 under high-glucose conditions. Exp. Ther. Med. 21: 389.

RESEARCH USE

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