

VEGFR2 (A-3): sc-6251

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 (A-3) is a mouse monoclonal antibody raised against amino acids 1158-1345 mapping at the C-terminus of the VEGFR2 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-6251 X, 200 µg/0.1 ml.

VEGFR2 (A-3) is available conjugated to agarose (sc-6251 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-6251 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-6251 PE), fluorescein (sc-6251 FITC), Alexa Fluor® 488 (sc-6251 AF488), Alexa Fluor® 546 (sc-6251 AF546), Alexa Fluor® 594 (sc-6251 AF594) or Alexa Fluor® 647 (sc-6251 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-6251 AF680) or Alexa Fluor® 790 (sc-6251 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

VEGFR2 (A-3) is recommended for detection of VEGFR2 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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.

VEGFR2 (A-3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of immature VEGFR2: 150 kDa.

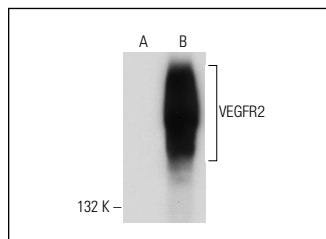
Molecular Weight of intermediate glycosylated VEGFR2: 200 kDa.

Molecular Weight of mature glycosylated VEGFR2: 230 kDa.

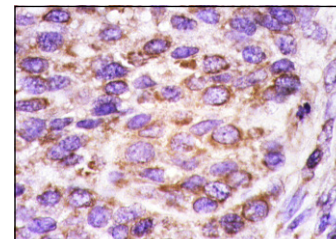
STORAGE

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

DATA



VEGFR2 (A-3): sc-6251. Western blot analysis of VEGFR2 expression in non-transfected: sc-117752 (A) and mouse VEGFR2 transfected: sc-120289 (B) 293T whole cell lysates.



VEGFR2 (A-3): sc-6251. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human colon carcinoma tissue showing membrane staining.

SELECT PRODUCT CITATIONS

1. Ilan, N., et al. 1999. PECAM-1 (CD31) functions as a reservoir for and a modulator of tyrosine-phosphorylated beta-catenin. *J. Cell Sci.* 112: 3005-3014.
2. Flickinger, I., et al. 2013. Radiation up-regulates the expression of VEGF in a canine oral melanoma cell line. *J. Vet. Sci.* 14: 207-214.
3. Ferreira, C.V., et al. 2014. Role of VEGF-A and its receptors in sporadic and MEN2-associated pheochromocytoma. *Int. J. Mol. Sci.* 15: 5323-5336.
4. Bian, Y., et al. 2015. Pathogenesis of glucocorticoid-induced avascular necrosis: a microarray analysis of gene expression *in vitro*. *Int. J. Mol. Med.* 36: 678-684.
5. Bao, X., et al. 2016. Directed endothelial progenitor differentiation from human pluripotent stem cells via Wnt activation under defined conditions. *Methods Mol. Biol.* 1481: 183-196.
6. Lecuyer, M., et al. 2017. PLGF, a placental marker of fetal brain defects after in utero alcohol exposure. *Acta Neuropathol. Commun.* 5: 44.
7. D'Amico, A.G., et al. 2018. Nap counteracts hyperglycemia/hypoxia induced retinal pigment epithelial barrier breakdown through modulation of HIFs and VEGF expression. *J. Cell. Physiol.* 233: 1120-1128.
8. Hori, A., et al. 2019. Vasculogenic mimicry is associated with trastuzumab resistance of HER2-positive breast cancer. *Breast Cancer Res.* 21: 88.
9. Yan, S., et al. 2020. MiR-182-5p inhibits colon cancer tumorigenesis, angiogenesis, and lymphangiogenesis by directly downregulating VEGF-C. *Cancer Lett.* 488: 18-26.
10. Bhattacharjee, J., et al. 2021. Physical activity differentially regulates VEGF, PlGF, and their receptors in the human placenta. *Physiol. Rep.* 9: e14710.

RESEARCH USE

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

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