

Product datasheet for **TA336480**

VEGF Receptor 2 (KDR) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	WB: 1:2000-1:10000, IHC: 1:10-1:500, IHC-P: 1:10-1:500, IP: 2-5 ul
Reactivity:	Human, Mouse
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Residues corresponding to the kinase insert or C-terminus of mouse VEGF Receptor 2 (residues 1158-1365). [Swiss-Prot# P35918]
Formulation:	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Concentration:	lot specific
Purification:	Whole antisera
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	150 kDa
Gene Name:	kinase insert domain receptor
Database Link:	NP_002244 Entrez Gene 16542 Mouse Entrez Gene 3791 Human P35968



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Background:

VEGFs such as VEGFA, VEGFC, VEGFD etc. activate RTKs namely VEGFR-1 (Flt-1), VEGFR-2 (KDR/Flk-1), and VEGFR-3 (Flt-4), that regulates angiogenic as well as lymphangiogenic transduction signals. VEGF Receptor 2 (VEGFR2) is the most prominent cell-surface receptor for VEGF ligands and binding of VEGFs to isoform 1 leads to multiple signaling cascades activation. PLCG1 activation results in production of signaling molecules (diacylglycerol, inositol 1,4,5-trisphosphate etc) and PKC activation. VEGFR2 is involved in the activation of MAPK1/ERK2, MAPK3/ERK1, and MAPK as well as AKT signaling pathways. It facilitates phosphorylation of PIK3R1 (regulatory subunit of PI3K), cytoskeletal actin reorganization and PTK2/FAK1 activation. VEGFR2 is essential for VEGFA-mediated induction of NOS2/NOS3, leading to the production of NO by endothelial cells and is involved in phosphorylation of FYN, NCK1, NOS3, PIK3R1 and SRC. Isoforms -2 and -3 function as decoy receptors for VEGFs, and isoform -2 plays as negative regulator of VEGFA/VEGFC-mediated lymphangiogenesis by limiting free VEGFA and/or VEGFC levels alongwith preventing their binding to VEGFR3. Versatile signaling effects by VEGFR2 leads to its regulatory role in processes such as angiogenesis, vascular development, vascular permeability, embryonic hematopoiesis, and promotes proliferation, survival, migration and differentiation of endothelial cells alongwith facilitating reorganization of the actin cytoskeleton.

Synonyms:

CD309; FLK1; VEGFR; VEGFR2

Note:

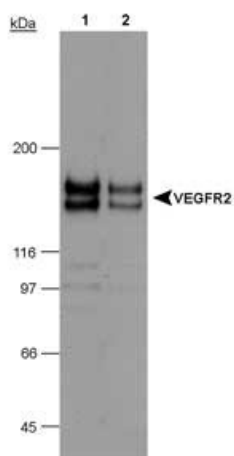
This VEGF Receptor 2 antibody is useful for Immunohistochemistry paraffin-embedded sections (PMID 10751359), Immunoprecipitation and Western blot where a doublet can be seen at ~ 150 kDa.

Protein Families:

Druggable Genome, ES Cell Differentiation/IPS, Protein Kinase, Transmembrane

Protein Pathways:

Cytokine-cytokine receptor interaction, Endocytosis, Focal adhesion, VEGF signaling pathway

Product images:


Western Blot: VEGF Receptor 2 Antibody TA336480 - Detection of VEGFR2 in CSF-1/VEGFR2 transfected lysates using NB 100-627. ECL detection in 15 seconds. Lane 1 - 1:2,000 Lane 2 - 1:10,000.