

Product datasheet for **TA336314**

VEGF Receptor 2 (KDR) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	ICC/IF, WB
Recommended Dilution:	Immunocytochemistry/ Immunofluorescence: 1:50 - 1:500, Western Blot: 1:250 - 1:1000
Reactivity:	Human, Mouse
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	A synthetic peptide made to an internal region of the mouse VEGF Receptor 2 protein (between residues 1200-1300). [Swiss-Prot# P35918]
Formulation:	Tris-citrate/phosphate, pH 7, 0.1% Sodium azide. Store at 4C. Do not freeze.
Concentration:	lot specific
Purification:	Immunogen affinity purified
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.

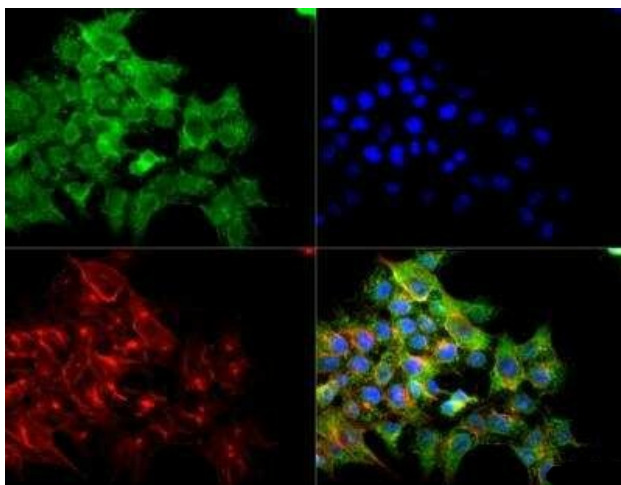
Synonyms: CD309; FLK1; VEGFR; VEGFR2

Note: This VEGF Receptor 2 antibody is useful for Immunocytochemistry/Immunofluorescence and Western blot, where a doublet is seen at ~150 kDa. In ICC/IF membrane staining can be seen in V6.5 mouse embryonic stem cells (cat# NBP1-41162).

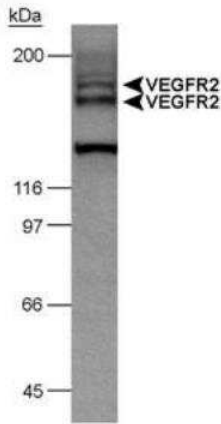
Protein Families: Druggable Genome, ES Cell Differentiation/IPS, Protein Kinase, Transmembrane

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

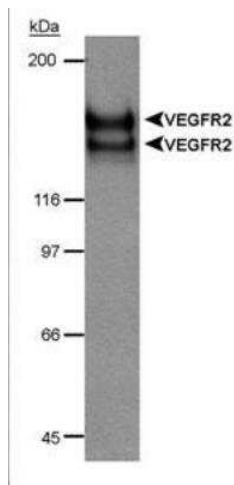
Product images:



Immunocytochemistry/Immunofluorescence: VEGF R2/KDR/Flk-1 Antibody TA336314 - The VEGF R2/KDR/Flk-1 antibody was tested in V6.5 mouse embryonic stem cells (NBP1-41162) with DyLight 488 (Green). Alpha-tubulin and nuclei were counterstained with DyLight 550 (Red) and DAPI (Blue), respectively.



Western Blot: VEGF R2/KDR/Flk-1 Antibody TA336314 - Detection of VEGF R2/KDR/Flk-1 doublet in VEGFA induced HUVEC cell lysate (50 ug) using TA336314 (4 ug/mL). ECL detection 2.5 minutes.



Western Blot: VEGF R2/KDR/Flk-1 Antibody TA336314 - Detection of VEGF R2/KDR/Flk-1 doublet in CSF-1 receptor/VEGF Receptor 2 chimera transfected lysate (20 ug) using TA336314 (6 ug/mL). ECL detection 30 seconds.