

Rabbit VEGFR1 Polyclonal Antibody | anti-VEGFR1 antibody

Phospho-VEGFR1 (Tyr1242) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329704	Rabbit	Human, Monkey Predicted Reactivity: Dog (82%)	ELISA, Immunocytochemistry, Immunofluorescence, Western Blot

PRODUCT SYNONYMS

VEGFR1; Polyclonal Antibody; Phospho-VEGFR1 (Tyr1242) Antibody; EC 2.7.10.1; FLT 1; FLT; Flt-1; FLT1; Fms like tyrosine kinase 1; Fms related tyrosine kinase 1; Fms related tyrosine kinase 1 (vascular endothelial growth factor/vascular permeability factor receptor); Fms related tyrosine kinase 1 vascular endothelial growth factor/vascular permeability factor receptor; Fms-like tyrosine kinase 1; FRT; Soluble VEGF receptor 1 14; Soluble VEGFR1 variant 2; Soluble VEGFR1 variant 21; Tyrosine protein kinase FRT; Tyrosine protein kinase receptor FLT; Tyrosine-protein kinase FRT; Tyrosine-protein kinase receptor FLT; Vascular endothelial growth factor receptor 1; Vascular endothelial growth factor vascular permeability factor receptor; Vascular permeability factor receptor 1; Vascular permeability factor receptor; VEGFR 1; VEGFR-1; VGFR1_HUMAN; anti-VEGFR1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Monkey Predicted Reactivity: Dog (82%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-VEGFR1 (Tyr1242) Antibody detects endogenous levels of VEGFR1 only when phosphorylated at Tyr1242. Tissue Specificity: Detected in normal lung, but also in placenta, liver, kidney, heart and brain tissues. Specifically expressed in most of the vascular endothelial cells, and also expressed in peripheral blood monocytes. Isoform 2 is strongly expressed in placenta. Isoform 3 is expressed in corneal epithelial cells (at protein level). Isoform 3 is expressed in vascular smooth muscle cells (VSMC).
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-VEGFR1 antibody	ELISA (Peptide ELISA), ICC (Immunocytochemistry), IF (Immunofluorescence), WB (Western Blot)
Immunogen	A synthesized peptide derived from human VEGFR1 around the phosphorylation site of Tyr1242.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	N-glycosylated. Ubiquitinated after VEGFA-mediated autophosphorylation, leading to proteolytic degradation. Autophosphorylated on tyrosine residues upon ligand binding. Autophosphorylation occurs in trans, i.e. one subunit of the dimeric receptor phosphorylates tyrosine residues on the other subunit. Phosphorylation at Tyr-1169 is important for interaction with PLCG. Phosphorylation at Tyr-1213 is important for interaction with PIK3R1, PTPN11, GRB2, and PLCG. Phosphorylation at Tyr-1333 is important for endocytosis and for interaction with CBL, NCK1 and CRK. Is probably dephosphorylated by PTPRB.
Subunit Structure	Interacts with VEGFA, VEGFB and PGF. Monomer in the absence of bound VEGFA, VEGFB or PGF. Homodimer in the presence of bound VEGFA, VEGFB and PGF. Can also form a heterodimer with KDR. Interacts (when tyrosine phosphorylated) with CBL, CRK, GRB2, NCK1, PIK3R1, PLCG, PSEN1 and PTPN11. Probably interacts also with PTPRB. Interacts with RACK1. Identified in a complex with CBL and CD2AP.

Similarity	The second and third Ig-like C2-type (immunoglobulin-like) domains are sufficient for VEGFA binding.Belongs to the protein kinase superfamily. Tyr protein kinase family. CSF-1/PDGF receptor subfamily.
Subcellular Location	Cell membrane>Single-pass type I membrane protein. Endosome. Note: Autophosphorylation promotes ubiquitination and endocytosis. Secreted. Secreted. Secreted. Cytoplasm. Cytoplasm. Cytoplasm.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



Application Data

At 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



WB (Western Blot)

Western blot analysis of VEGFR1 (Phospho-Tyr1242) using nocodazole treated COS7 whole cell lysates.-/+ means absence or presence of N peptide¼non-phospho peptide) and P peptide(phospho peptide).



WB (Western Blot)

Western blot analysis of extracts from VERO cells(H2O2 treatment), using Phospho-VEGFR1 (Tyr1242) Antibody. The lane on the left was treated with blocking peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-VEGFR1 antibody	Tyrosine-protein kinase that acts as a cell-surface receptor for VEGFA, VEGFB and PGF, and plays an essential role in the development of embryonic vasculature, the regulation of angiogenesis, cell survival, cell migration, macrophage function, chemotaxis, and cancer cell invasion. May play an essential role as a negative regulator of embryonic angiogenesis by inhibiting excessive proliferation of endothelial cells. Can promote endothelial cell proliferation, survival and angiogenesis in adulthood. Its function in promoting cell proliferation seems to be cell-type specific. Promotes PGF-mediated proliferation of endothelial cells, proliferation of some types of cancer cells, but does not promote proliferation of normal fibroblasts (in vitro). Has very high affinity for VEGFA and relatively low protein kinase activity; may function as a negative regulator of VEGFA signaling by limiting the amount of free VEGFA and preventing its binding toKDR. Likewise, isoforms lacking a transmembrane domain, such as isoform 2, isoform 3 and isoform 4, may function as decoy receptors for VEGFA. ModulatesKDR signaling by forming heterodimers withKDR. Ligand binding leads to the activation of several signaling cascades. Activation of PLCG leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate and the activation of protein kinase C. Mediates phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, leading to activation of phosphatidylinositol kinase and the downstream signaling pathway. Mediates activation of MAPK1/ERK2, MAPK3/ERK1 and the MAP kinase signaling pathway, as well as of the AKT1 signaling pathway. Phosphorylates SRC and YES1, and may also phosphorylate CBL. Isoform 1 phosphorylates PLCG. Promotes phosphorylation of AKT1 at 'Ser-473'. Promotes phosphorylation of PTK2/FAK1. Isoform 7 has a truncated kinase domain; it increases phosphorylation of SRC at 'Tyr-418' by unknown means and promotes tumor cell invasion.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	229892220
NCBI GeneID	2321
NCBI Accession #	NP_001153392.1
NCBI GenBank Nucleotide #	NM_001159920.1
UniProt Accession #	P17948; O60722; P16057; A3E342; A3E344; A8KA71; B0LPF1; B2BF46; B2BF47; B3FR89; B5A923; F5H5L6

Molecular Weight	150,769 Da
NCBI Official Full Name	vascular endothelial growth factor receptor 1 isoform 2
NCBI Official Synonym Full Names	fms-related tyrosine kinase 1
NCBI Official Symbol	FLT1
NCBI Official Synonym Symbols	FLT; FLT-1; VEGFR1; VEGFR-1
NCBI Protein Information	vascular endothelial growth factor receptor 1; fms-like tyrosine kinase 1; tyrosine-protein kinase FRT; tyrosine-protein kinase receptor FLT; vascular permeability factor receptor; fms-related tyrosine kinase 1 (vascular endothelial growth factor/vascular
UniProt Protein Name	Vascular endothelial growth factor receptor 1
UniProt Gene Name	FLT1
UniProt Synonym Gene Names	FLT; FRT; VEGFR1; VEGFR-1; FLT-1; FLT
UniProt Entry Name	VGFR1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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