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Mouse Anti-VEGFR3 antibody

SLM-51245M

Product Name	VEGFR3
Chinese Name	vascular endothelial cell 生长因子受体 3 单克隆抗体
Alias	Vascular endothelial growth factor receptor 3; VEGF Receptor 3; Tyrosine-protein kinase; AI323512; Chy; FLT4; FLT41; LMPH1A; LOC285682; PCL; VEGFR-3; fms-related tyrosine kinase 4; VGFR3_UHMAN.
Immunogen Species	Mouse
Clonality	Monoclonal
React Species	Human
Applications	WB=1:500-2000 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	151kDa
Cellular localization	The nucleus cytoplasmic The cell membrane Secretory protein
Form	Liquid
Concentration	1mg/ml
immunogen	Recombinant Human VEGFR3 protein
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
PubMed	PubMed
Product Detail	Vascular endothelial growth factors (VEGFs) are a family of closely related growth factors having a conserved pattern of eight cysteine esidues and sharing common VEGF receptors. VEGFs stimulate the proliferation of

endothelial cells, induce angiogenesis, and increase vascular permeability in both large and small vessels. The mitogenic activity of VEGFs appears to be mediated by specific VEGF receptors. VEGF Receptor 3 is one of the five receptor tyrosine kinases (RTKs) (VEGF Receptor 1/Flt1, VEGF Receptor 2/KDR/Flk1, VEGF Receptor 3/Flt4, tie1 and tek/tie2) whose expression is almost exclusively restricted to endothelial cells

Function:
Tyrosine-protein kinase that acts as a cell-surface receptor for VEGFC and VEGFD, and plays an essential role in adult lymphangiogenesis and in the development of the vascular network and the cardiovascular system during embryonic development. Promotes proliferation, survival and migration of endothelial cells, and regulates angiogenic sprouting. Signaling by activated FLT4 leads to enhanced production of VEGFC, and to a lesser degree VEGFA, thereby creating a positive feedback loop that enhances FLT4 signaling. Modulates KDR signaling by forming heterodimers. Mediates activation of the MAPK1/ERK2, MAPK3/ERK1 signaling pathway, of MAPK8 and the JUN signaling pathway, and of the AKT1 signaling pathway. Phosphorylates SHC1. Mediates phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase. Promotes phosphorylation of MAPK8 at 'Thr-183' and 'Tyr-185', and of AKT1 at 'Ser-473'.

Subunit:
Interacts with VEGFC and VEGFD. Monomer in the absence of bound VEGFC or VEGFD. Homodimer in the presence of bound VEGFC or VEGFD. Can also form a heterodimer with KDR. Interacts with PTPN14; the interaction is enhanced by stimulation with VEGFC. Interacts with CRK, GRB2, PTK2/FAK1, SHC1, PIK3R1 and PTPN11/SHP-2. Identified in a complex with SRC and ITGB1.

Subcellular Location:
Cell membrane; Single-pass type I membrane protein. Cytoplasm. Nucleus. Note=Ligand-mediated autophosphorylation leads to rapid internalization. Isoform 1: Cell membrane; Single-pass type I membrane protein.

Tissue Specificity:
Detected in endothelial cells (at protein level). Widely expressed. Detected in fetal spleen, lung and brain. Detected in adult liver, muscle, thymus, placenta, lung, testis, ovary, prostate, heart, and kidney.

Post-translational modifications:
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 in

response to H(2)O(2) is mediated by a process that requires SRC and PRKCD activity. Phosphorylation at Tyr-1068 is required for autophosphorylation at additional tyrosine residues. Phosphorylation at Tyr-1063 and Tyr-1337 is important for interaction with CRK and subsequent activation of MAPK8. Phosphorylation at Tyr-1230, Tyr-1231 and Tyr-1337 is important for interaction with GRB2 and subsequent activation of the AKT1 and MAPK1/ERK2 and/or MAPK3/ERK1 signaling pathways. In response to endothelial cell adhesion onto collagen, can also be phosphorylated in the absence of FLT4 kinase activity by SRC.

Similarity:
Belongs to the protein kinase superfamily. Tyr protein kinase family. CSF-1/PDGF receptor subfamily.
Contains 7 Ig-like C2-type (immunoglobulin-like) domains.
Contains 1 protein kinase domain.

SWISS:
P35916

Gene ID:
2324

Database links:

Entrez Gene: 2324 Human

Entrez Gene: 14257 Mouse

Entrez Gene: 114110 Rat

Omim: 136352 Human

SwissProt: P35916 Human

SwissProt: P35917 Mouse

SwissProt: Q91ZT1 Rat

VEGFR3 又称 FLt4 主要在成熟组织的淋巴管 endothelial cells 上表达,VEGF-R3 与淋巴管 endothelial cells 增殖和迁移有关，有刺激淋巴管新生的作用，目前多用于 Tumour 转移方面的研究。