

AR31161PU-N**Mouse CD309 / VEGFR-2 / Flk-1 (esKDR) - Purified****Alternate names:**

FLK1, KDR, Kinase NYK, Kinase insert domain receptor, Protein-tyrosine kinase receptor Flk-1, VEGF Receptor 2, VEGFR2, Vascular endothelial growth factor receptor 2

Quantity:

20 µg

Background:

Disruption of the precise balance of positive and negative molecular regulators of blood and lymphatic vessel growth can lead to myriad diseases. Although dozens of natural inhibitors of hemangiogenesis have been identified, an endogenous selective inhibitor of lymphatic vessel growth has not to our knowledge been previously described. A splice variant of the gene encoding vascular endothelial growth factor receptor-2 (VEGFR-2) that encodes a secreted form of the protein, designated endogenous soluble VEGFR-2 (esVEGFR-2/KDR) has been described. The endogenous soluble esKDR inhibits developmental and reparative lymphangiogenesis by blocking VEGF-C function. Tissue-specific loss of esKDR in mice induced, at birth, spontaneous lymphatic invasion of the normally alymphatic cornea and hyperplasia of skin lymphatics without affecting blood vasculature. Administration of esKDR inhibited lymphangiogenesis but not hemangiogenesis induced by corneal suture injury or transplantation, enhanced corneal allograft survival and suppressed lymphangioma cellular proliferation. Naturally occurring esKDR thus acts as a molecular uncoupler of blood and lymphatic vessels; modulation of esKDR might have therapeutic effects in treating lymphatic vascular malformations, transplantation rejection and, potentially, tumor lymphangiogenesis and lymphedema.

NCBI:[10090](#)**Species:**

Mouse

Source:

Insect cells

Format:**State:** Lyophilized protein**Purity:** >95% by SDS-PAGE and silver stain**Buffer System:** 25 mM MES, 100 mM NaCl, pH 5.5**Stabilizers:** None**Endotoxin Level:** < 0.1 ng per µg of esKDR**Reconstitution:** Restore in water or PBS to a concentration of not lower than 100 µg/ml.**Description:**

Mouse VEGFR-2/Flk-1 (native), soluble.

Subunit: glycosylated monomer.**AA Sequence:**ASVGLTGDFLHPPKLSSTQKDILITILANTTLQITCRGQRDLDLWLPNAQRDSEERVLVTECGGGDSIFCKTLT
IPRVV
GNDTGAYKCSYRDVDIASTVYVYVRDYRSPFIASVSDQHGIYVITENKNKTVVIPCRGISINLNVSLCARYP
EKRFV
PDGNRISWDSEIGFTLPSYMISYAGMVFCSEAKINDETYQSIMYIVVVVGYRIYDVILSPPHEIELSAGEKLV
LNCTA
RTELNVGLDFTWHSPPSKSHHKKIVNRDVKPFPGTVAKMFLSTLTIESVTKSDQGEYTCVASSGRMIKRNR
FVRVH
TKPFIAFGSGMKSLEATVGSQVRIPVKYLSYPAPDIKWYRNGRPIESNYTMIVGDELTIMEVTERDAGNYT

VILTN
PISMEKQSHMVSLVNVPPQIGEKALISPMSYQYGTMTLTCTVYANPPLHHIQWYWQLEEACSYRPGQTS
PYACK
EWRHVEDFQGGNKIEVTKNQYALIEGKNKTVSTLVIQAANVSALYKCEAINKAGRGERVISFHVIRGPEITV
QPAAQ
PTEQESVSLLECTADRNTFENLTWYKLGSAQTSVHMGESLTPVCKNLDALWKLNGTMFSNSTNDILIVAFQNA
SLQDQ
GDYVCSAQDKKTKKRHCLVKQLIILGMEASLGDRAMP

Biological Activity: Measured by its ability to inhibit the VEGF165-induced proliferation in human umbilical vein endothelial (HUVE) cells.

Molecular weight: ~ 105 kDa (654 amino acids)

Storage:

Store lyophilized at 2-8°C for 6 months or at -20°C long term.

After reconstitution store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C long term.

Avoid repeated freezing and thawing.

Shelf life: one year from despatch.

General Readings:

1. Shibata et al, BMC Medicine 8 (2010)
2. Albuquerque et al, Nature Med 2009
3. Ebos et al, Mol Cancer Res 2 (2004)
4. Ebos JM, Lee CR, Bogdanovic E, Alami J, Van Slyke P, Francia G, et al. Vascular endothelial growth factor-mediated decrease in plasma soluble vascular endothelial growth factor receptor-2 levels as a surrogate biomarker for tumor growth. Cancer Res. 2008 Jan 15;68(2):521-9. doi: 10.1158/0008-5472.CAN-07-3217. PubMed PMID: 18199548.