Anti-human endogenous soluble VEGFR-2/KDR

20140402BB

FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	**102-PA19S**
Size:	100 µg
Lot. No.:	According to product label
Country of origin:	Germany

Preparation: Produced from sera of rabbits pre-immunized with a peptide consisting of the unique C-terminal end of esKDR: CGRETILDHSAEAVGMP.

Target Background

Synonyms:	Vascular endothelial growth factor receptor 2, Protein-tyrosine kinase receptor flk-1

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.
Recombinant human esKDR generated by alternative splicing consist of the first 6 Ig-like loops followed by the unique C-terminal end: *CGRETILDHSAEAVGMP*.

References

1. Shibata et al, BMC Medicine 8 (2010)
2. Albaquerque et al, Nature Med 2009
3. Ebos et al, Mol Cancer Res 2 (2004)
4. Ebos et al, Cancer res 68 (2008).

Database References Antigen

Protein RefSeq:	NP_002244.1
Uniprot ID:	P22333
mRNA RefSeq:	NM_002253.2

Product Specifications

Species reactivity	human
Clone/Ab feature	Rabbit IgG
Cross reactivity	**Specific for human esKDR!**
Host	rabbit
Clonality	polyclonal
Purification	Protein A purified
Immunogen	Peptide: CGRETILDHSAEAVGMP.
Formulation	lyophilized
Buffer	PBS

Stability: The lyophilized antibody is stable at room temperature for up to 1 month. The reconstituted antibody is stable for at least two weeks at 2-8°C. Frozen aliquots are stable for at least 6 months when stored at -20°C.

Reconstitution: Centrifuge vial prior to opening. Reconstitute in sterile water to a concentration of 0.1-1.0 mg/ml.

AVOID REPEATED FREEZE AND THAW CYCLES!

Applications

Western Blot:	Use at 1-5 µg/ml
IF/IHC:	Use at 1-5 µg/ml

NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!

Anti-human endogenous soluble VEGFR-2/KDR

Handling/Applications

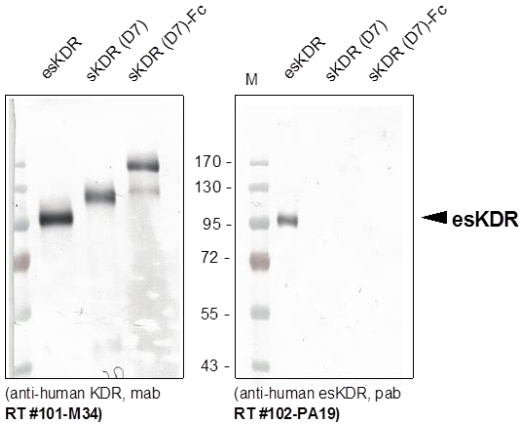

Figure 1. Western Analysis of anti-human esKDR. Samples were loaded in 10% SDS-polyacrylamide gel under reducing conditions.
Left panel: monoclonal antibody against the soluble KDR D1-7); Right panel: polyclonal antibody (peptide) against against the unique C-terminal end of esKDR.

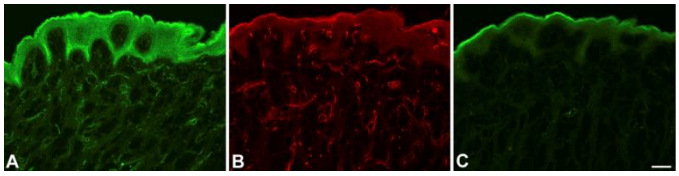

Figure 2: Immunofluorescence staining with consecutive sections of unfixed, human foreskin. A) Staining with anti-sVEGFR2/KDR antibodies (#102-PA19). Note signal in epidermis and vessels. B) Staining with anti-membrane-bound VEGFR-2/KDR (#101-M32). Note staining in vessels. C) Negative control. Note non-specific fluorescence in the hornified layer of the epithelium.

Provided by Prof. J. Wilting, Göttingen, Germany.