

KDR

Recombinant Human VEGFR-2 (D7) Fc Chimera, soluble

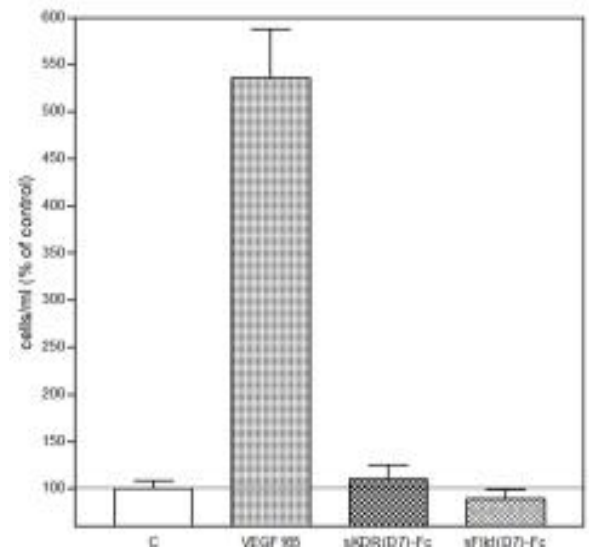
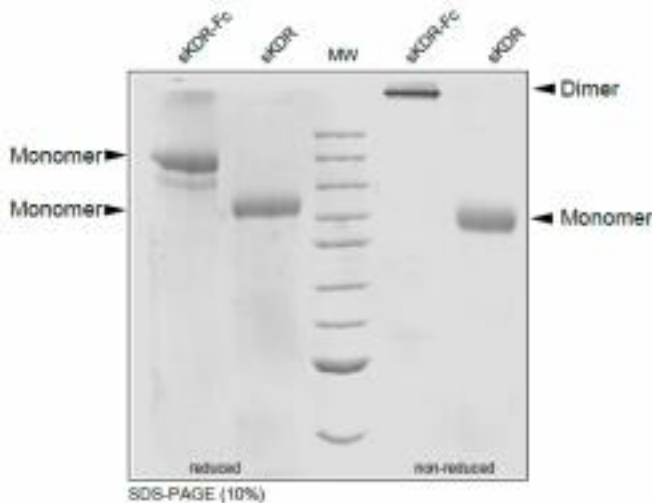
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|---------------------------------|---|------------------|----------------|
| Catalog No. | CRK100A CRK100B | Quantity: | 10 µg 50 µg |
| Alternate Names: | Vascular endothelial growth factor receptor 2, CD309, Fetal liver kinase 1, FLK-1, Kinase insert domain receptor, KDR | | |
| Description: | <p>Recombinant human soluble Vascular Endothelial Growth Factor Receptor-2 was fused with the Fc part of human IgG1. The recombinant mature sVEGFR-2_{D1-7}/Fc is a disulfide-linked homodimeric protein. The soluble receptor protein consists of all 7 extracellular domains (Met1-Ala757), which contain all the information necessary for high affinity ligand binding.</p> <p>Endothelial cells express three different vascular endothelial growth factor (VEGF) receptors, belonging to the family of receptor tyrosine kinases (RTKs). They are named VEGFR-1 (Flt-1), VEGFR-2 (KDR/Flk-1), and VEGFR-3 (Flt-4). Their expression is almost exclusively restricted to endothelial cells, but VEGFR-1 can also be found on monocytes. All VEGF-receptors have seven immunoglobulin-like extracellular domains, a single transmembrane region and an intracellular split tyrosine kinase domain. VEGFR-2 has a lower affinity for VEGF than the Flt-1 receptor, but a higher signalling activity. Mitogenic activity in endothelial cells is mainly mediated by VEGFR-2 leading to their proliferation. Differential splicing of the <i>flt-1</i> gene leads to the formation of a secreted, soluble variant of VEGFR-1 (sVEGFR-1).</p> <p>No naturally occurring, secreted forms of VEGFR-2 have so far been reported. The binding of VEGF₁₆₅ to VEGFR-2 is dependent on heparin.</p> | | |
| UniProt ID: | P35968 | | |
| GeneID: | 3791 | | |
| Source: | Insect cells | | |
| Molecular Weight: | 145 kDa (968 aa) Monomer | | |
| Formulation: | Lyophilized from PBS, pH 7.4 | | |
| Purity: | >90% by SDS-PAGE and visualized by silver stain | | |
| Endotoxin Level: | < 1 EU/µg | | |
| Biological Activity: | The activity of sVEGFR-2/Fc was determined by its ability to inhibit the VEGF-dependent proliferation of human umbilical vein endothelial cells. | | |
| Reconstitution: | Centrifuge vial prior to opening. Add PBS or medium to the vial to fully solubilize the protein to a concentration ≥ 100 µg/ml. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein such as 0.1% BSA and store in working aliquots at -20°C to -80°C. | | |
| Storage & Stability: | Lyophilized protein is stable for 1 year at -20°C to -80°C. Store reconstituted protein in working aliquots at -20°C to -80°C. Avoid repeated freeze-thaw cycles. | | |



Amino Acid Sequence: ASVGLPSVSL DLPRLSIQKD ILTIKANTTL QITCRGQRDL DWLWPNNQSG
 SEQRVEVTEC SDGLFCKTLT IPKVIGNDTG AYKCFYRETD LASVIYVVVQ
 DYRSPFIASV SDQHGVMYIT ENKNKTVVIP CLGSISNLNV SLCARYPEKR
 FVPDGNRISW DSKKGFITPS YMISYAGMVF CEAKINDESY QSIMYIVVVV
 GYRIYDVVLS PSHGIELSVG EKLVLNCTAR TELNVGIDFN WEYPSSKHQH
 KKLVNRDLKT QSGSEMKKFL STLTIDGVTR SDQGLYTCAA SSGMLTKKNS
 TFVRVHEKPF VAFGSGMESL VEATVGERVR IPAKYLGYPP PEIKWYKNGI
 PLESNHTIKA GHVLTIMEVS ERDTGNYTVI LTNPISKEKQ SHVSVLVVVV PPQIGEKSLI
 SPVDSYQYGT TQTLTCTVYA IPPPHHHWY WQLEEEECANE PSQAVSVTNP
 YPCEEWRSVE DFQGGNKIEV NKNQFALIEG KNKTVSTLVI QAAVNSALYK

SDS-PAGE analysis of recombinant human soluble KDR_{D1-7} and soluble KDR_{D1-7}/Fc chimera. Silver stained. The soluble KDR_{D1-7}/Fc protein forms dimers whereas soluble KDR_{D1-7} does not.

Inhibition of the VEGF165-induced proliferation of HUVE cells by recombinant human and mouse sKDR(D7)-Fc and sFlk-1(D7)-Fc. HUVECs were stimulated with 10 ng/ml VEGF165, both soluble receptors were added with a 100X excess.



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