

DATASHEET

Version 20181206

VEGF R2/KDR, Human

Cat. No.: Z03366-50

Size: 50.0 ug

Synonyms: CD309; Flk-1; KDR

Description:

Vascular endothelial growth factor receptor 2 (VEGF R2), also known as Kinase insert domain receptor (KDR) and Fetal Liver Kinase 1 (Flk-1), is a type III receptor tyrosine kinase which plays a critical role in angiogenesis. VEGFR-1 and VEGFR-2 are closely related receptor tyrosine kinases and have both common and specific ligands. VEGFR-1 is a kinase-impaired RTK whereas VEGFR-2 is a highly active kinase. Vascular endothelial growth factors (VEGFs) are crucial regulators of vascular development during embryogenesis (vasculogenesis) as well as blood-vessel formation (angiogenesis) in the adult. In mammals, five VEGF ligands, which occur in several different splice variants and processed forms, have been identified so far. These ligands bind in an overlapping pattern to three receptor tyrosine kinases (RTKs), known as VEGF receptor-1, -2 and -3 (VEGFR1-3), as well as to co-receptors (here defined as VEGF-binding molecules that lack established VEGF-induced catalytic function), such as heparin sulphate proteoglycans (HSPGs) and neuropilins.

Recombinant Human VEGF R2/KDR produced in CHO cells is a polypeptide chain containing 978 amino acids. rhVEGFR2/KDR has a molecular mass of 150 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

Amino Acid Sequence:

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00001 ASVGLPSVSL DLPRLSIQKD ILTIKANTTL QITCRGQRDL
00041 DWLWPNQSG SEQRVEVTEC SDGLFCKTLT IPKVIGNDTG
00081 AYKCFYRETD LASVIYVYVQ DYRSPFIASV SDQHGVVYIT
00121 ENKNKTVVIP CLGSISNLNV SLCARYPEKR FVPDGNRISW
00161 DSKKGFTIPS YMISYAGMVF CEAKINDESY QSIMYIVVVV
00201 GYRIYDVVLS PSHGIELSVG EKLVLNCTAR TELNVGIDFN
00241 WEYPSSKHQH KKLVRDLKT QSGSEMKKFL STLTIDGVTR
00281 SDQGLYCAA SSGLMTKKNS TFVRVHEKPF VAFSGMESL
00321 VEATVGERVR IPAKYLGYPP PEIKWYKNGI PLESNHTIKA
00361 GHVLTIMEVS ERDTGNYTVI LTNPISKEKQ SHVSLVYVY
00401 PPQIGEKSLI SPVDSYQYGT TQTLTCTVYA IPPPHIHWHY
00441 WQLEEECANE PSQAVSVTNP YPCEEWRVSE DFQGGNKIEV
00481 NKNQFALIEG KNKTVSTLVI QAAVVSALYK CEAVNKVGRG
00521 ERVISFHVTR GPEITLQPDH QPTEQESVSL WCTADRSTFE
00561 NLTWYKLGPK PLPIHVGELP TPVCKNLDTL WKLNATMFSN
00601 STNDILIMEL KNASLQDQGD YVCLAQDRKT KKRHCVVVRQL
00641 TVLERVAPTI TGNLENQTTS IGESIEVSCT ASGNPPPPQIM
00681 WFKDNETLVE DSGIVLKDGN RNLTIRRVK EDEGLYTCQA
00721 CSVLGCAKVE AFFIIEGAQE KTNLEIEGRM DDKTHTCPPC
00761 PAPELLGGPS VFLFPPKPKD TLMISRTPEV TCVVVDVSHE
00801 DPEVKFNWYV DGEVHNKAKT KPREEQYNST YRVVSVLTVL
00841 HQDWLNGKEY KCKVSNKALP APIEKTISKA KGQPREPQVY
00881 TLPPSREEMT KNQVSLTCLV KGFYPSDIAV EWESNGQPEN
00921 NYKTTTPVLD SDGSFFLYSK LTVDKSRWQQ GNVFSCSVMH
00961 EALHNHYTQK SLSLSPGK
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Source: CHO

Biological Activity: Measured by its ability to inhibit the VEGF dependent proliferation of HUVEC (human umbilical vein endothelial cells). The ED₅₀ for this effect is < 30 ng/mL in the presence of 5 ng/mL rhVEGF165 (Catalog: Z02689-10).

Molecular Weight: 150 kDa, observed by reducing SDS-PAGE.

Formulation: Lyophilized after extensive dialysis against PBS.

Reconstitution: Reconstituted in ddH₂O or PBS at 100 µg/ml.

Purity: > 98% as analyzed by SDS-PAGE&HPLC.

Endotoxin Level: < 0.2 EU/µg, determined by LAL method.

Storage: Lyophilized recombinant Human VEGF R2/KDR remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, Human VEGF R2/KDR should be stable up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.