# Active Recombinant Mouse Kdr Protein

**Cat. No.** Kdr-7422M **Lot. No.** (See product label)

## SPECIFICATION

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| **Product Overview** | Recombinant mouse VEGFR-2/Flk-1 (native) protein without tag was expressed in insect cells. |
| **Species** | Mouse |
| **Source** | Insect Cells |
| **Description** | Tyrosine-protein kinase that acts as a cell-surface receptor for VEGFA, VEGFC and VEGFD. Plays an essential role in the regulation of angiogenesis, vascular development, vascular permeability, and embryonic hematopoiesis. Promotes proliferation, survival, migration and differentiation of endothelial cells. Promotes reorganization of the actin cytoskeleton. Isoforms lacking a transmembrane domain, such as isoform 2, may function as decoy receptors for VEGFA, VEGFC and/or VEGFD. Isoform 2 plays an important role as a negative regulator of VEGFA- and VEGFC-mediated lymphangiogenesis by limiting the amount of free VEGFA and/or VEGFC and by preventing their binding to FLT4. Modulates FLT1 and FLT4 signaling by forming heterodimers. Binding of vascular growth factors to isoform 1 leads to the activation of several signaling cascades. Activation of PLCG1 leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate and the activation of protein kinase C. Mediates activation of MAPK1/ERK2, MAPK3/ERK1 and the MAP kinase signaling pathway, as well as of the AKT1 signaling pathway. Mediates phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, reorganization of the actin cytoskeleton and activation of PTK2/FAK1. Required for VEGFA-mediated induction of NOS2 and NOS3, leading |

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| | to the production of the signaling molecule nitric oxide (NO) by endothelial cells. Phosphorylates PLCG1. Promotes phosphorylation of FYN, NCK1, NOS3, PIK3R1, PTK2/FAK1 and SRC. |
| **Form** | Lyophilized |
| **Bio-activity** | Measured by its ability to inhibit the VEGF165-induced proliferation in human umbilical vein endothelial (HUVE) cells. |
| **Molecular Mass** | ~ 105 kDa |
| **AA Sequence** | ASVGLTGDFLHPPKLSTQKDILTILANTTLQITCRGQRDLDWLWPNAQRDSEERVLV TECGGGDSIFCKTLTIPRVVGNDTGAYKCSYRDVDIASTVYVYVRDYRSPFIASVSD QHGIVYITENKNKTVVIPCRGSISNLNVSLCARYPEKRFVPDGNRISWDSEIGFTLPSY MISYAGMVFCEAKINDETYQSIMYIVVVVGYRIYDVILSPPHEIELSAGEKLVLNCTAR TELNVGLDFTWHSPPSKSHHKKIVNRDVKPFPGTVAKMFLSTLTIESVTKSDQGEYT CVASSGRMIKRNRTFVRVHTKPFIAFGSGMKSLVEATVGSQVRIPVKYLSYPAPDIK WYRNGRPIESNYTMIVGDELTIMEVTERDAGNYTVILTNPISMEKQSHMVSLVVNVP PQIGEKALISPMDSYQYGTMQTLTCTVYANPPLHHIQWYWQLEEACSYRPGQTSPY ACKEWRHVEDFQGGNKIEVTKNQYALIEGKNKTVSTLVIQAANVSALYKCEAINKAG RGERVISFHVIRGPEITVQPAAQPTEQESVSLLCTADRNTFENLTWYKLGSQATSVH MGESLTPVCKNLDALWKLNGTMFSNSTNDILIVAFQNASLQDQGDYVCSAQDKKTK KRHCLVKQLIILGMEASLGDRIAMP |
| **Endotoxin** | < 0.1 ng/μg of esKDR |
| **Purity** | > 95 % by SDS-PAGE and Silver staining |
| **Stability** | Shelf life: one year from despatch. |

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| **Storage** | Store lyophilized at 2-8 centigrade for 6 months or at -20 centigrade long term.<br>After reconstitution store the antibody undiluted at 2-8 centigrade for one month or (in aliquots) at -20 centigrade long term.<br>Avoid repeated freezing and thawing. |
| **Storage Buffer** | 25 mM MES, 100 mM NaCl, pH 5.5 |
| **Reconstitution** | Restore in water or PBS to a concentration of not lower than 100 µg/mL. |

## GENE INFORMATION

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| **Gene Name** | Kdr kinase insert domain protein receptor [ Mus musculus (house mouse) ] |
| **Official Symbol** | Kdr |
| **Synonyms** | Kdr; kinase insert domain protein receptor; Flk; orv; Flk-; Flk1; Ly73; VEGF; Flk-1; Krd-1; VEGFR; VEGFR2; VEGFR-2; sVEGFR-2; 6130401C07; vascular endothelial growth factor receptor 2; VEGF receptor-2; fetal liver kinase 1; kinase NYK; protein-tyrosine kinase receptor flk-1; soluble vascular endothelial growth factor receptor 2; vascular endothelial growth factor receptor-3; EC 2.7.10.1 |
| **Gene ID** | 16542 |
| **mRNA Refseq** | NM_010612 |
| **Protein Refseq** | NP_034742 |
| **UniProt ID** | P35918 |

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