Recombinant Human Kinase Insert Domain Receptor (a type III receptor tyrosine kinase)

Cat. No. KDR-5447H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant HumanKDR is produced as a non-chimeric protein in a monomeric form, which has aMW=116 kDa.
Species	Human
Source	Insect Cells
Description	KDR, belonging to the family of receptortyrosine kinases (RTKs). They are named VEGFR-1 (Flt-1), VEGFR-2 (KDR/Flk-1),VEGFR-3 (Flt-4). Their expression is almost exclusively restricted toendothelial cells, but VEGFR-1 can also be found on monocytes. All KDR have seven immunoglobulin-like extracellulardomains, a single transmembrane region and an intracellular split tyrosinekinase domain. VEGFR-2 has a lower affinity for VEGF than the Flt-1 receptor,but a higher signaling activity. Mitogenic activity in endothelial cells ismainly mediated by VEGFR-2 leading to their proliferation. Differentialsplicing of the flt-1 gene leads to the formation of a secreted, solublevariant of VEGFR-1 (KDR). No naturally occurring, secreted formsof VEGFR-2 have so far been reported. The binding of VEGF165 to VEGFR-2 isdependent on heparin.
Form	Lyophilized from abuffer of 20 mM Tris + 150 mM NaCl, pH 8.0.
Molecular Weight	116 kDa
Purity	> 90% by SDS-PAGEand visualized by silver stain

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Endotoxin Level	< 0.1 ng/μg ofsKDR
Biological Activity	The activity ofrecombinant human sVEGFR-2 was determined by its ability to abolish the bindingof iodinated VEGF to solid surfaces or cell surfaces. The ED50 for thiseffect is typically 10.0 ng/ml.
Reconstitution	Centrifuge vialprior to opening. The lyophilized human sKDR is soluble in water and mostaqueous buffers. The lyophilized powder should be reconstituted in water orPBS to a concentration not lower than 100 μg/ml.
Storage	The material isstable for greater than six months at -20°C to -80°C. After the first thawingit is recommended to aliquot the material in order to avoid repeated freeze-thawcycles. Store at 2-4°C not longer than 2 days.
OfficialSymbol	KDR

GENE INFORMATION

Gene Name	KDR kinase insert domainreceptor (a type III receptor tyrosine kinase) [Homo sapiens]
Synonyms	KDR; kinase insertdomain receptor (a type III receptor tyrosine kinase); FLK1; CD309; VEGFR; VEGFR2;vascular endothelial growth factor receptor 2; soluble VEGFR2;OTTHUMP00000158928; fetal liver kinase 1; fetal liver kinase-1;protein-tyrosine kinase receptor Flk-1; tyrosine kinase growth factorreceptor; EC 2.7.10; EC 2.7.10.1
Gene ID	3791
mRNA Refseq	NM_002253

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Protein Refseq	NP_002244
MIM	191306
UniProt ID	P35968
Chromosome Location	4q11-q12
Pathway	Angiogenesis;Cytokine-cytokine receptor interaction; Endocytosis; Focal Adhesion;HIF-2-alpha transcription factor network; Id Signaling Pathway; Integrins inangiogenesis; Neurophilin interactions with VEGF and VEGFR; Notch-mediatedHES/HEY network; S1P1 pathway; Signal Transduction; Signaling events mediatedby VEGFR1 and VEGFR2; VEGF binds to VEGFR leading to receptor dimerization;VEGF ligand-receptor interactions; VEGF signaling pathway
Function	ATP binding; Hsp90protein binding; growth factor binding; integrin binding; nucleotide binding;protein binding; protein tyrosine kinase activity; receptor activity;receptor signaling protein tyrosine kinase activity; transmembrane receptorprotein tyrosine kinase activity; vascular endothelial growthfactor-activated receptor activity
Rendering of 1VR2.	

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA