

Product datasheet for **RC600027**

VEGF Receptor 2 (KDR) (NM_002253) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	VEGF Receptor 2 (KDR) (NM_002253) Human Tagged ORF Clone
Tag:	DDK-His
Symbol:	VEGF Receptor 2
Synonyms:	CD309; FLK1; VEGFR; VEGFR2
Mammalian Cell Selection:	None
Vector:	pCMV6-XL5-DDK-His (PS100068)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RC600027 representing leader sequence plus the extracellular domain region of NM_002253

Red=Cloning site Blue=ORF Green=Tags(s)

GTAATACGACTCACTATAGGGCGGCCGGAATTCGTGCGACTGGATCTGGTACCGAGGAGATCCGCCGCCG
CGATCGCC

ATGCAGAGCAAGGTGCTGCTGGCCGTCGCCCTGTGGCTCTGCGTGGAGACCCGGGCCCTCTGTGGGTT
TGCCTAGTGTCTTCTTCTGATCTGCCAGGCTCAGCATACAAAAGACATACTTACAATTAAGGCTAATAC
AACTCTTCAAATTAAGGCTGAGGAGGACTTGGACTGGCTTTGGCCCAATAATCAGAGTGGCAGT
GAGCAAAGGGTGGAGGTGACTGAGTGCAGCGATGGCCTTCTGTAAAGACTCACAATTCAAAAGTGA
TCGAAATGACTGGAGCCTACAAGTCTTACCGGAAACTGACTTGGCCTCGGTCAATTTATGTCTA
TGTTCAAGATTACAGATCTCCATTTATTGCTTCTGTTAGTGACCAACATGGAGTCGTGTACACTGAG
AACAAAAAAAAGTGTGGTATTCCATGTCTCGGGTCCATTTCAAATCTCAACGTGCTACTTTGTGCAA
GATACCCAGAAAAGAGATTTGTTCTGATGGTAACAGAATTTCTGGGACAGCAAGAAGGGCTTTACTAT
TCCCAGCTACATGATCAGCTATGCTGGCATGGTCTTCTGTGAAGCAAAAATTAATGATGAAAATACCAG
TCTATTATGTACATAGTTGTCGTTGTAGGGTATAGGATTTATGATGTGGTCTGAGTCCGCTCATGGAA
TTGAACACTCTGTTGGAGAAAAGCTTGTCTTAAATTTGACAGCAAGAAGTGAACAAAATGTGGGGATTGA
CTTCAACTGGGAATACCTTCTTTCGAAGCATCAGCATAAGAAAAGTGTAAACCGAGACCTAAAAACCCAG
TCTGGGAGTGAGATGAAGAAATTTTGGACACCTTAACTATAGATGGTGTAAACCGGAGTGACCAAGGAT
TGTACACCTGTGCAGCATCCAGTGGGCTGATGACCAAGAAGAACAGCACATTTGTGAGGGTCCATGAAA
ACCTTTTGTGCTTTTGGAAAGTGGCATGGAATCTCTGGTGAAGCCACGGTGGGGAGCGTGTGAGAATC
CTGCGAAGTACCTTGGTTACCCACCCAGAAAATAAAATGGTATAAAAATGGAATACCCCTTGAGTCCA
ATCACACAATTAAGCGGGCATGTAAGTACTGACGATTATGGAAGTGAGTGAAGAGACACAGGAAATACAC
TGTCACTTACCAATCCATTTCAAAGGAGAAGCAGAGCCATGTGGTCTCTGTTGTGTATGTCCCA
CCCCAGATTGGTGAGAAATCTCTAATCTCTCTGTTGATTCTACCAGTACGGCACCCTCAAACGCTGA
CATGTACGGTCTATGCCATTCTCCCCGCATCACATCCACTGGTATTGGCAGTTGGAGGAAGAGTGCAGC
CAACGAGCCAGCAAGCTGTCTCAGTGACAAACCCATACCTTGTGAAGAATGGAGAAGTGTGGAGGAC
TTCCAGGGAGGAAATAAAATGAAGTAAATAAAAATCAATTTGCTCTAATTGAAGAAAAAACAAGTGT
TAAGTACCCTTGTATCCAAGCGGCAAAATGTGTCAGCTTTGTACAAATGTGAAGCGGTCAACAAAGTCGG
GAGAGGAGAGAGGGTGTCTCTCCACGTGACCAGGGTCTGAAATTAATTTGCAACCTGACATGCAG
CCCACTGAGCAGGAGAGCGTGTCTTGTGGTGCAGTGCAGACAGATCTAGTTTGAGAACCTCACATGGT
ACAAGCTTGGCCACAGCCTCTGCCAATCCATGTGGGAGAGTTGCCACACCTGTTTGAAGAAGTGGAA
TACTCTTTGGAAATGAATGCCACCATGTTCTCTAATAGCACAATGACATTTTGTATCATGGAGCTTAAG
AATGCATCCTTGCAGGACCAAGGAGACTATGTCTGCCTTGTCAAGACAGGAAGCAAGAAAAGACATT
GCGTGGTCAAGGAGCTCACAGTCTAGAGCGTGTGGCACCCACGATCACAGGAAACCTGGAGAATCAGAC
GACAAGTATTGGGAAAGCATCGAAGTCTCATGCACGGCATCTGGGAATCCCCCTCCACAGATCATGTGG
TTTAAAGATAATGAGACCCTTGTAGAAGACTCAGGCATTGTATTGAAGGATGGGAACCGGAACCTCACTA
TCCGCAGAGTGAGGAAGGAGGACGAAGGCCTCTACACCTGCCAGGCATGCAGTGTCTTGGCTGTGCAAA
AGTGGAGGCATTTTTATATAAGAGGTGCCAGGAAAAGACGAAGTGGAA

ACGCGTTCAGGGCACTACAAGGATGACGACGATAAGGGATCTCATCATCACCATCACCATTAATGAGATC
TGGTACCGATATCAAGCTTGTGACTCTAGA

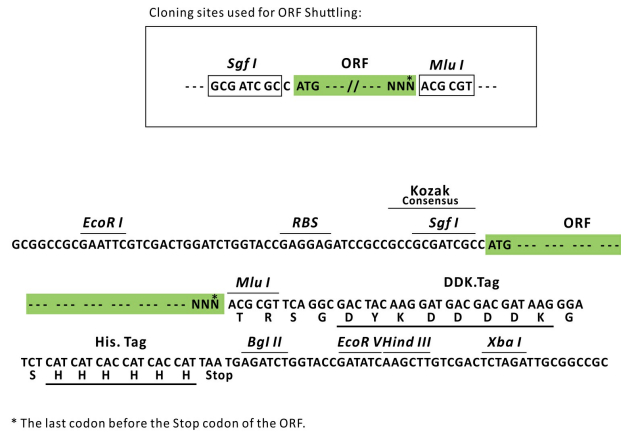
Protein Sequence: >RC600027 representing signal peptide plus the extracellular domain region of NM_002253
Red=Cloning sites Green= DDK and 6XHIS Tags

MQSKVLLAVALWLCVETRAASVGLPSVSLDLPRLSIQKDILT IKANTTLQITCRGQRDLDWLWPNNQSGS
EQRVEVTECSDFCKTLTIPKVI GNDTGAYKCFYRETDLASVIYVYVQDYRSPFIASVSDQHGVVYITE
NKNKTVVIPCLGSI SNLNVSLCARYPEKRFVPDGNRISWDSKKGFTIPSYMISYAGMVFCEAKINDESYQ
SIMYIVVVVGYRIYDVVLSHGI ELSVGEKLVNCTARTELVGIDFNWEYPSSKHQHKLVNRDLKTQ
SGSEMKKFLSTLIDGVTRSDQGLYTCAASSGLMTKKNSTFVRVHEKPFVAFSGMESLVEATVGERVRI
PAKYLGYPPPEIKWYKNGI PLESNHTIKAGHVLTIMEVSRDTGNYTVILTNPISKEKQSHVVS L VVYVP
PQIGEKSLISPVDSYQYGT TQTLTCTVYAI PPPHHIHWYQLEEECANEPSQAVSVTNPYPCEEWRSVED
FQGGNKIEVNKNQFALIEGKNKT VSTLVIQAANVSALYKCEAVNKVGRGERVISFHVTRGPEITLQPMQ
PTEQESVSLWCTADRSTFENL TWYKLGPOPLIHVGELPTPVCKNLDLWKLNATMFSNSTNDILIMELK
NASLQDQGDYVCLAQDRKTKKRHC VVRQLTVLERVAPTITGNLENQTTSIGESIEVSCTASGNPPPQIMW
FKDNETLVEDSGIVLKDGNRNL TIRRVKED EGLYTCQACSVLGC AKVEAFFIIEGAQEKTNLE

TRSGTRSGDYKDDDDKGS HHHHHH

Chromatograms: https://cdn.origene.com/chromatograms/mk8117_e08.zip

Restriction Sites: Sgfl-Mlul

Cloning Scheme:


ACCN: NM_002253

ORF Size: 2292 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation:	This clone was engineered to express the extra cellular domain of the protein with an expression tag. Expression varies depending on the nature of the gene.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none">1. Centrifuge at 5,000xg for 5min.2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.3. Close the tube and incubate for 10 minutes at room temperature.4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	NM_002253.2 , NP_002244.1
RefSeq Size:	6055 bp
RefSeq ORF:	4071 bp
Locus ID:	3791
UniProt ID:	P35968
Cytogenetics:	4q12
Domains:	pkinese, TyrKc, S_TKc, ig, IGc2, IG
Protein Families:	Druggable Genome, ES Cell Differentiation/IPS, Protein Kinase, Transmembrane
Protein Pathways:	Cytokine-cytokine receptor interaction, Endocytosis, Focal adhesion, VEGF signaling pathway
MW:	85.4 kDa
Gene Summary:	Vascular endothelial growth factor (VEGF) is a major growth factor for endothelial cells. This gene encodes one of the two receptors of the VEGF. This receptor, known as kinase insert domain receptor, is a type III receptor tyrosine kinase. It functions as the main mediator of VEGF-induced endothelial proliferation, survival, migration, tubular morphogenesis and sprouting. The signalling and trafficking of this receptor are regulated by multiple factors, including Rab GTPase, P2Y purine nucleotide receptor, integrin alphaVbeta3, T-cell protein tyrosine phosphatase, etc.. Mutations of this gene are implicated in infantile capillary hemangiomas. [provided by RefSeq, May 2009]