OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for SC323623

VEGF Receptor 2 (KDR) (NM_002253) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	VEGF Receptor 2 (KDR) (NM_002253) Human Untagged Clone
Tag:	Tag Free
Symbol:	VEGF Receptor 2
Synonyms:	CD309; FLK1; VEGFR; VEGFR2
Mammalian Cell Selection:	None
Vector:	pCMV6-XL6
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF:

>OriGene ORF within SC323623 sequence for NM_002253 edited (data generated by NextGen Sequencing)

ATGCAGAGCAAGGTGCTGCTGGCCGTCGCCCTGTGGCTCTGCGTGGAGACCCGGGCCGCC
TCTGTGGGTTTGCCTAGTGTTTCTCTTGATCTGCCCAGGCTCAGCATACAAAAAGACATA
CTTACAATTAAGGCTAATACAACTCTTCAAATTACTTGCAGGGGACAGAGGGACTTGGAC
TGGCTTTGGCCCAATAATCAGAGTGGCAGTGAGCAAAGGGTGGAGGTGACTGAGTGCAGC
GATGGCCTCTTCTGTAAGACACTCACAATTCCAAAAGTGATCGGAAATGACACTGGAGCC
TACAAGTGCTTCTACCGGGAAACTGACTTGGCCTCGGTCATTTATGTCTATGTTCAAGAT
TACAGATCTCCATTTATTGCTTCTGTTAGTGACCAACATGGAGTCGTGTACATTACTGAG
AACAAAAACAAAACTGTGGTGATTCCATGTCTCGGGTCCATTTCAAATCTCAACGTGTCA
CTTTGTGCAAGATACCCAGAAAAGAGATTTGTTCCTGATGGTAACAGAATTTCCTGGGAC
AGCAAGAAGGGCTTTACTATTCCCAGCTACATGATCAGCTATGCTGGCATGGTCTTCTGT
GAAGCAAAAATTAATGATGAAAGTTACCAGTCTATTATGTACATAGTTGTCGTTGTAGGG
TATAGGATTTATGATGTGGTTCTGAGTCCGTCTCATGGAATTGAACTATCTGTTGGAGAA
AAGCTTGTCTTAAATTGTACAGCAAGAACTGAACTAAATGTGGGGATTGACTTCAACTGG
GAATACCCTTCTTCGAAGCATCAGCATAAGAAACTTGTAAACCGAGACCTAAAAACCCAG
TCTGGGAGTGAGATGAAGAAATTTTTGAGCACCTTAACTATAGATGGTATAACCCGGAGT
GACCAAGGATTGTACACCTGTGCAGCATCCAGTGGGCTGATGACCAAGAAGAACAGCACA
TTTGTCAGGGTCCATGAAAAACCTTTTGTTGCTTTTGGAAGTGGCATGGAATCTCTGGTG
GAAGCCACGGTGGGGGAGCGTGTCAGAATCCCTGCGAAGTACCTTGGTTACCCACCCCCA
GAAATAAAATGGTATAAAAATGGAATACCCCTTGAGTCCAATCACACAATTAAAGCGGGG
CATGTACTGACGATTATGGAAGTGAGTGAAAGAGACACAGGAAATTACACTGTCATCCTT
ACCAATCCCATTTCAAAGGAGAAGCAGAGCCATGTGGTCTCTCTGGTTGTGTATGTCCCA
CCCCAGATTGGTGAGAAATCTCTAATCTCTCCTGTGGATTCCTACCAGTACGGCACCACT
CAAACGCTGACATGTACGGTCTATGCCATTCCTCCCCCGCATCACATCCACTGGTATTGG
CAGTTGGAGGAAGAGTGCGCCAACGAGCCCAGCCAAGCTGTCTCAGTGACAAACCCATAC
CCTTGTGAAGAATGGAGAAGTGTGGAGGACTTCCAGGGAGGAAATAAAATTGAAGTTAAT

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AAAAATCAATTTGCTCTAATTGAAGGAAAAAACAAAACTGTAAGTACCCTTGTTATCCAA
GCGGCAAATGTGTCAGCTTTGTACAAATGTGAAGCGGTCAACAAAGTCGGGAGAGGAGAG
AGGGTGATCTCCTTCCACGTGACCAGGGGTCCTGAAATTACTTTGCAACCTGACATGCAG
CCCACTGAGCAGGAGAGCGTGTCTTTGTGGTGCACTGCAGACAGATCTACGTTTGAGAAC
CTCACATGGTACAAGCTTGGCCCACAGCCTCTGCCAATCCATGTGGGAGAGTTGCCCACA
CCTGTTTGCAAGAACTTGGATACTCTTTGGAAATTGAATGCCACCATGTTCTCTAATAGC
ACAAATGACATTTTGATCATGGAGCTTAAGAATGCATCCTTGCAGGACCAAGGAGACTAT
GTCTGCCTTGCTCAAGACAGGAAGACCAAGAAAAGACATTGCGTGGTCAGGCAGCTCACA
GTCCTAGAGCGTGTGGCACCCACGATCACAGGAAACCTGGAGAATCAGACGACAAGTATT
GGGGAAAGCATCGAAGTCTCATGCACGGCATCTGGGAATCCCCCTCCACAGATCATGTGG
TTTAAAGATAATGAGACCCTTGTAGAAGACTCAGGCATTGTATTGAAGGATGGGAACCGG
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AGTGTTCTTGGCTGTGCAAAAGTGGAGGCATTTTTCATAATAGAAGGTGCCCAGGAAAAG
ACGAACTTGGAAATCATTATTCTAGTAGGCACGGCGGTGATTGCCATGTTCTTCTGGCTA
CTTCTTGTCATCATCCTACGGACCGTTAAGCGGGCCAATGGAGGGGAACTGAAGACAGGC
TACTTGTCCATCGTCATGGATCCAGATGAACTCCCATTGGATGAACATTGTGAACGACTG
CCTTATGATGCCAGCAAATGGGAATTCCCCAGAGACCGGCTGAAGCTAGGTAAGCCTCTT
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CTTCTAGGTGCCTGTACCAAGCCAGGAGGGCCACTCATGGTGATTGTGGAATTCTGCAAA
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ACCTTGGAGCATCTCATCTGTTACAGCTTCCAAGTGGCTAAGGGCATGGAGTTCTTGGCA
TCGCGAAAGTGTATCCACAGGGACCTGGCGGCACGAAATATCCTCTTATCGGAGAAGAAC
GTGGTTAAAATCTGTGACTTTGGCTTGGCCCGGGATATTTATAAAGATCCAGATTATGTC
AGAAAAGGAGATGCTCGCCTCCCTTTGAAATGGATGGCCCCAGAAACAATTTTTGACAGA
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GAAGGAACTAGAATGAGGGCCCCTGATTATACTACACCAGAAATGTACCAGACCATGCTG
GACTGCTGGCACGGGGAGCCCAGTCAGAGACCCACGTTTTCAGAGTTGGTGGAACATTTG
GGAAATCTCTTGCAAGCTAATGCTCAGCAGGATGGCAAAGACTACATTGTTCTTCCGATA
TCAGAGACTTTGAGCATGGAAGAGGATTCTGGACTCTCTCTGCCTACCTCACCTGTTTCC
TGTATGGAGGAGGAGGAAGTATGTGACCCCAAATTCCATTATGACAACACAGCAGGAATC
AGTCAGTATCTGCAGAACAGTAAGCGAAAGAGCCGGCCTGTGAGTGTAAAAACATTTGAA
GATATCCCGTTAGAAGAACCAGAAGTAAAAGTAATCCCAGATGACAACCAGACGGACAGT
GGTATGGTTCTTGCCTCAGAAGAGCTGAAAACTTTGGAAGACAGAACCAAATTATCTCCA
TCTTTTGGTGGAATGGTGCCCAGCAAAAGCAGGGAGTCTGTGGCATCTGAAGGCTCAAAC
CAGACAAGCGGCTACCAGTCCGGATATCACTCCGATGACACAGACACCACCGTGTACTCC
AGTGAGGAAGCAGAACTTTTAAAGCTGATAGAGATTGGAGTGCAAACCGGTAGCACAGCC
CAGATTCTCCAGCCTGACTCGGGGACCACACTGAGCTCTCCTCCTGTTTAA

Clone variation with respect to NM_002253.2
889 g=>a;2603 a=>w;2604 a=>r

5' Read Nucleotide Sequence:

>OriGene 5' read for mutant NM_002253 unedited
CCCGCCCGTTGAGCAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGA
ACCGTCAGAATTTTGTAATACGACTCACTATAGGGCGGCCGCGAATTCGGCACGAGGGAGAGCGGTCAGT
GTGTGGTCGCTGCGTTTCCTCTGCCTGCGCCGGGCATCACTTGCGCGCCGCAGAAAGTCCGTCTGGCAGC
CTGGATATCCTCTCCTACCGGCACCCGCAGACGCCCCTGCAGCCGCGGTCGGCGCCCGGGCTCCCTAGCC
CTGTGCGCTCAACTGTCCTGCGCTGCGGGGTGCCGCGAGTTCCACCTCCGCGCCTCCTTCTCTAGACAGG
CGCTGGGAGAAAGAACCGGCTCCCGAGTTCTGGGCATTTCGCCCGGCTCGAGGTGCAGGATGCAGAGCAA
GGTGCTGCTGGCCGTCGCCCTGTGGCTCTGCGTGGAGACCCGGGCCGCCTCTGTGGGTTTGCCTAGTGTT
TCTCTTGATCTGCCCAGGCTCAGCATACAAAAAGACATACTTACAATTAAGGCTAATACAACTCTTCAAA
TTACTTGCAGGGACAGAGGGACTTGGACTGGGCTTTGGCCCAATAATCAGAGTGGCAGTGAGCAAAGGTG
GAGGTGACTGGAGTGCAGCGATGGCCTCTTCTGTAGGACACTCACATTCCAAAGTGATCGGAAATGACAC
TGAAGCCTACAGTGCTTCTACCGGAAACTGACTGGCCTCGTCATTATGTCTATTGTCAGATACAGATCTC
CATTAATGCTCTGTAATGACCACATGGAGTCGTGTACTAACTGAGAACAAACAAACTGTGGTGATCCATG
TTCGGTCAATCCATCTCACCTGTAATTTGCCAGAACCCAGAAAGATGTCCTGAGTACGAATTCTGACACG
AGCTACATCAGTCTGATACGCAATAGTCGCAATGTCCTTGGGACATTAATGCTGAAA

Kinase Domain Sequence:

>SC323623 kinase domain raw sequence. By performing BLASTX analysis with this sequence against NCBI refernce protein database, you can confirm the presence of the kinase-deficient mutation
TGCGGKCTGCTTTGGCAGTGWTGAGCAGATGCCTTTGGAATTGACAAGACAGCAACTTGCAGGACAGTAG
CAGTCATGATGTTGAAAGAAGGAGCAACACACAGTGAGCATCGAGCTCTCATGTCTGAACTCAAGATCCT
CATTCATATTGGTCACCATCTCAATGTGGTCAACCTTCTAGGTGCCTGTACCAAGCCAGGAGGGCCACTC
ATGGTGATTGTGGAATTCTGCAAATTTGGAAACCTGTCCACTTAC

Restriction Sites: Please inquire

ACCN: NM_002253

Insert Size: 6000 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 kinase-deficient mutant clone was generated by created by site-directed mutagenesis from the corresponding wild-type clone. See details in "Application of active and kinase-deficient kinome collection for identification of kinases regulating hedgehog signaling." Cell. 2008 May p536-548.

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:	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_002253.1, NP_002244.1
RefSeq Size:	5830 bp
RefSeq ORF:	4071 bp
Locus ID:	3791
UniProt ID:	P35968
Cytogenetics:	4q12
Domains:	pkinase, 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
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]