

Product datasheet for **RR216058**

Vegfa (NM_001287107) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Vegfa (NM_001287107) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Vegfa
Synonyms:	Vegf; VEGF-A; VEGF111; VEGF164; VPF
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RR216058 representing NM_001287107 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAAC**TTCTGCTCTCTTGGGTGCACTGGACCCTGGCTTTACTGCTGTACCTCCACCATGCCAAGTGGT**
CCCAGGCTGCACCCACGACAGAAGGGGAGCAGAAAGCCCATGAAGTGGTGAAGTTCATGGACGTCTACCA
GCGCAGCTATTGCCGTCCAATTGAGACCCTGGTGGACATCTCCAGGAGTACCCCGATGAGATAGAGTAT
ATCTTCAAGCCGTCTGTGTGCCCTAATGCGGTGTGCGGGCTGCTGCAATGATGAAGCCCTGGAGTGCG
TGCCACGTCGGAGAGCAACGTCACTATGCAGATCATGCGGATCAAACCTCACAAAGCCAGCACATAGG
AGAGATGAGCTTCTGCAGCATAGCAGATGTGAATGCAGACCAAAGAAAGATAGAACAAAGCCAGAAAAA
AAATCAGTTCGAGGAAAGGGAAAGGGTCAAAAACGAAAGCGCAAGAAATCCCGGTTTAAATCCTGGAGCG
TTCAGTGTGAGCCTTGTTCAGAGCGGAGAAAGCATTGTTTGTCCAAGATCCGCAGACGTGTAATGTTC
CTGCAAAAACACAGACTCGCGTTGCAAGGCGAGGCAGCTTGAGTTAAACGAACGTA**CTTGCAGATGTGAC**
AAGCCAAGGCGG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RR216058 representing NM_001287107
 Red=Cloning site Green=Tags(s)

MNFLLSWVHWTLALLLYLHHAQWSQAAPTTEGEQKAHEVVKFMVYQRSYCRPIETLVDIFQEYPDEIEY
 IFKPSCVPLMRCAGCCNDEALECVPTSESNVTMIMRIKPHQSQIHIGEMSFLLQHSRCECRPKKDRTPKPEK
 KSVRGGKGGKRRKRKRSRFSKWSVHCEPCERRKHLFVQDPQTCKCSCKNTDSRCKARQLELNERTCRCD
 KPRR

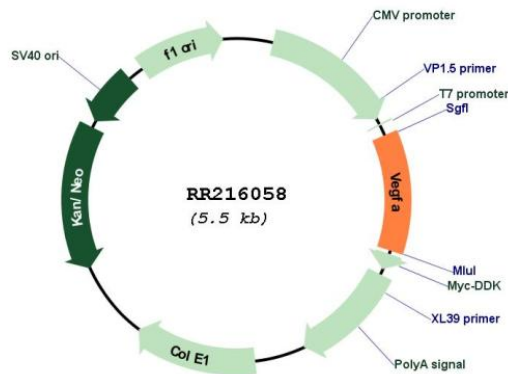
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001287107

ORF Size: 642 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 complete ORF 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:

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_001287107.1](#), [NP_001274036.1](#)

RefSeq Size: 3546 bp

RefSeq ORF: 645 bp

Locus ID: 83785

UniProt ID: [P16612](#)

Cytogenetics: 9q12

MW: 25.2 kDa

Gene Summary:

This gene is a member of the PDGF/VEGF growth factor family. It encodes a heparin-binding protein, which exists as a disulfide-linked homodimer. This growth factor induces proliferation and migration of vascular endothelial cells, and is essential for both physiological and pathological angiogenesis. Disruption of this gene in mice resulted in abnormal embryonic blood vessel formation. This gene is upregulated in many known tumors and its expression is correlated with tumor stage and progression. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. There is also evidence for alternative translation initiation from upstream non-AUG (CUG) codons resulting in additional isoforms. A recent study showed that a C-terminally extended isoform is produced by use of an alternative in-frame translation termination codon via a stop codon readthrough mechanism, and that this isoform is antiangiogenic. Expression of some isoforms derived from the AUG start codon is regulated by a small upstream open reading frame, which is located within an internal ribosome entry site. [provided by RefSeq, Nov 2015]