

## Product datasheet for **MR226187**

### **Krit1 (NM\_030675) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Krit1 (NM_030675) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Krit1
Synonyms:	2010007K12Rik; A630036P20Rik; AA432855; AI450393; AI643869; BB155247; BB235701; Ccm1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide  
Sequence:

>MR226187 representing NM\_030675  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGCATCGCC**

ATGGGAAATCCAGAAAACATCGAAGATGCTTACGTTGCGATTATTCGTCCAAAGAACACTGCTAGTCTCA  
ACTCCCGGAGTATAGAGCTAAGTCCTATGAAATTTTATTGCATGAAGTCCATTGAAGGACAGAAAA  
AAAGCGAAAGAAAGTTTTGCTGGAACTAACTTCAAAGCAACAGTGAAATAGCACAAGGCATATTGGAC  
TATGTAGTAGAAAACACAAACCAATTTCTCTGCAAACAGGGGATTAAAGGAAACGAGTGGTCTGA  
TGAGGAAGTTTCTCTGGACGGAGAGAAGACAGGCAGAGAAGCAGCACTGTTTATCGTGCCATCAGTTGT  
CAAAGATAATACTAAATATGCATATACTCTGGATGCCAATTTTTTACTGCTTACAAGATATTATGAGA  
GTTTGTAGTGAATCCAGTACTCACTTTGCAACACTTACAGCAAGGATGTTAATAGCCTTGGATAAGTGGT  
TAGATGAACGTCATGCGCAGTCTCACTTTATTCCAGCTTTATTCCGACCTTCTCCCCTTGAACGGATAAA  
GACAAATGTCATAAACCCCTGCGTATGCTGCTGAATTAGGCCAGGTAGACAATTCACTACATATGGGCTAT  
AGTGCCTAGAAAATAAAGAGTAAAATGCTAGCCCTAGAGAAAGCAGACACCTGCATTTACAACCCCTTGT  
TTGGATCAGATCTTCAGTATACAATCGGGTAGATAAAAGTGGTAATAAATCCATACTTTGGTCTCGGAGC  
TCCAGACTACTCAAAAATCCAAATCCCAAACAGGAAAAATGGCAGCGAAGCATGAGCAGCGTTGTGGAA  
GACAAAGAACGACAGTGGGTTGATGACTTTCTTTACATCGAAATGCCTGTGAAGGAGATTCAGAATTAC  
TGAGCCATCTTCTCGATAAAGGACTTTCACTCAACCACTAGATAATGACCACTGGGCACCCATTTCATTA  
TGCATGCTGGTATGGAAAAGTTGAGGCCACTCGCATATTATTAGAGAAAGGAAAGTGAATCCAAACCTT  
TTAAATGGGCAGCTCAGCTCACCCTTCACTTTGCTGCTGGAGGGCCATGCTGAAATAGTGCAGATCC  
TCCTGACTCACCAGACATTGACAGGCACATAACAGATCAACAAGGAAGATCCCCATTAATGTTTGTGA  
AGAAAACAAACAAAATAAAGTGGGAAGAAGCTGCAAAATTTGTTGAAAGACGCCATTAACAAGCCATATGAA  
AAAGTTTGAATCTATAGAATGGATGGATCATACCGTTCTGTTGAACTAAAGCATGGCAATATACCACAG  
CACAGCAGATAATGGAGGGAATGCGGCTCTCTCAGGAACTCAGCGATATTTCACTATTTGGATCTGTTT  
AGAAAATCTTAGTCTTCAAGCTTATCATAAACCCCTTGAACAAGTTCATGACTGGCCAGAAAATA  
CTTGCTGAATTGACTAATTTGGATCCACAAGAGAAAACACCACAGCTTTTCTAAGAAGAGATGTGGGAC  
TTCCTTTAGAAGTTGAGAAAAAGATTGAAGACCCACTAGCTATTCTTATTCTCTTTGATGAAGCCAGATA  
TAATTTACTGAAGGGCTTTTATACAGCTCCTGATGCTAACTGATAAAGTGGCAAGTCTACTGTTACAA  
ATAGTTTATGGGAATTATGAGAGTAAAAAGCACAACAAGGTTTCTTAAATGAAGAACTCTGAAATCCA  
TCGTACCTATTACTAACTGAAAAGTAAGGCGCCTCACTGGATAAACCGAATACTCCATGAGTACAAGAA  
TCTGAGTCTGAGTGAAGGCGTCAGTAAGGAAATGCACCACCTGCAGCGCATGTTCTACAGAAGTCTGG  
GAGATCCCTACGTACGGAGCCGCTTCTTACAGGACAGATATTTACAAAGGCAAGCCCAAGCAATCATA  
AAGTCAATCCCTGTGTATGTAGGAGTGAATATAAAGGACTTCACTCTCTGAACATGGAACTAAGGCATT  
ACTCATCAGTCTCAAGTACTGTTGCTTTACGTGGCAGCTGGGAGATGCTGGTACTTGTTTCAAATCCAT  
AGTATGGAAAATAAATGAGCTTTATAGTACACAAAAACAGGCTGGCCTTGTGGTAAAGCTGCTAATGA  
AGTTAAATGGACAATAATGCCCTCTGAAAGAAATTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR226187 representing NM\_030675  
 Red=Cloning site Green=Tags(s)

MGNPENIEDAYVAVIRPKNTASLNSREYRAKSYEILLHEVPIEGQKKRKKVLLLETKLQSNSEIAQGILD  
 YVVETTKPISPANQGIKGRVLMRKFPLDGEKTGREAAFLFVPSVVKDNTKYAYTPGCPIFYCLQDIMR  
 VCESSTHFATLTARMLIALDKWLDERHAQSHFIPALFRPSPLERIKTNVINPAYAAELGQVDNSLHMGY  
 SALEIKSKMLALEKADTCIYNPLFGSDLQYTNRVDKVVINPYFGLGAPDYSKIQIPKQEKWQSRMSSVVE  
 DKERQWVDDFPLHRNACEGDSELLSHLLDKGLSVNQQLDNDHWAPIHYACWYGVKVEATRILLEKGCNPNL  
 LNGQLSSPLHFAAGGGHAEIVQILLTHPDIDRHITDQQGRSPLNVCEENKQNNWEEAAKLLKDAINKPYE  
 KVRIYRMDGSYRSVELKHGNNTTAQQIMEGMRLSQETQRYFTIWCSENLSQLFKPYHKPLQQVHDWPEI  
 LAELTNLDPQRETPQLFLRRDVGLPLEVEKKIEDPLAILILFDEARYNLLKGFYAPDAKLITLASLLQ  
 IVYGNYESKHKQGLNEETLKSIVPITKLKSKAPHWINRILHEYKNLSLSEGVSKEMHHLQRMFLQNCW  
 EIPTYGAFFTGQIFTKASPSNHKVIPVYVGVNIKGLHLLNMETKALLISLKYCCFTWQLGDAGTCFQIH  
 SMENKMSFIVHTKQAGLVVLLMKLNGQLMPSEKNS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mm9097\\_a08.zip](https://cdn.origene.com/chromatograms/mm9097_a08.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_030675

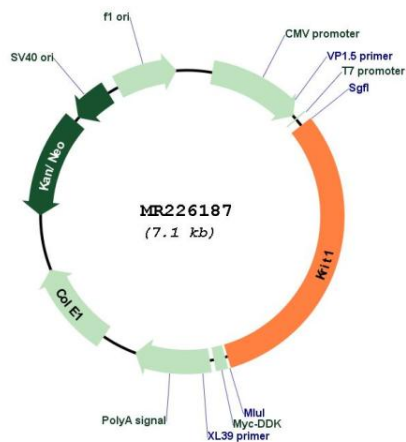
**ORF Size:** 2208 bp

**OTI Disclaimer:** 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.

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u><a href="#">NM_030675.3</a></u> , <u><a href="#">NP_109600.2</a></u>
<b>RefSeq Size:</b>	6105 bp
<b>RefSeq ORF:</b>	2211 bp
<b>Locus ID:</b>	79264
<b>UniProt ID:</b>	<u><a href="#">Q6S5J6</a></u>
<b>Cytogenetics:</b>	5 2.26 cM
<b>MW:</b>	84 kDa
<b>Gene Summary:</b>	<p>Component of the CCM signaling pathway which is a crucial regulator of heart and vessel formation and integrity. Negative regulator of angiogenesis. Inhibits endothelial proliferation, apoptosis, migration, lumen formation and sprouting angiogenesis in primary endothelial cells. Promotes AKT phosphorylation in a NOTCH-dependent and independent manner, and inhibits ERK1/2 phosphorylation indirectly through activation of the DELTA-NOTCH cascade. Acts in concert with CDH5 to establish and maintain correct endothelial cell polarity and vascular lumen and these effects are mediated by recruitment and activation of the Par polarity complex and RAP1B. Required for the localization of phosphorylated PRKCZ, PARD3, TIAM1 and RAP1B to the cell junction, and cell junction stabilization. Plays a role in integrin signaling via its interaction with ITGB1BP1; this prevents the interaction between ITGB1 and ITGB1BP1. Microtubule-associated protein that binds to phosphatidylinositol 4,5-bisphosphate (PIP2)-containing membranes in a GTP-bound RAP1-dependent manner (By similarity). Plays an important role in the maintenance of the intracellular reactive oxygen species (ROS) homeostasis to prevent oxidative cellular damage. Regulates the homeostasis of intracellular ROS through an antioxidant pathway involving FOXO1 and SOD2. Facilitates the down-regulation of cyclin-D1 (CCND1) levels required for cell transition from proliferative growth to quiescence by preventing the accumulation of intracellular ROS through the modulation of FOXO1 and SOD2 levels.[UniProtKB/Swiss-Prot Function]</p>

Product images:



Circular map for MR226187