

## Product datasheet for **MC221186**

### **Krit1 (NM\_030675) Mouse Untagged Clone**

#### **Product data:**

|                           |  |
|---------------------------|--|
| Product Type:             | Expression Plasmids  |
| Product Name:             | Krit1 (NM_030675) Mouse Untagged Clone   |
| Tag:                      | Tag Free   |
| 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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**Fully Sequenced ORF:** >MC221186 representing NM\_030675  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGGAAATCCAGAAAACATCGAAGATGCTTACGTTGCAGTTATTCGTCCAAAGAACACTGCTAGTCTCA  
 ACTCCCGGAGTATAGAGCTAAGTCCTATGAAATTTTATTGCATGAAGTCCATTGAAGGACAGAAAAA  
 AAAGCGAAAGAAAGTTTTGCTGGAACTAACTTCAAAGCAACAGTGAAATAGCACAAGGCATATTGGAC  
 TATGTAGTAGAAAACACAAACCAATTTCTCTGCAAACAGGGGATTAAAGGAAACGAGTGGTCTGA  
 TGAGGAAGTTTCTCTGGACGGAGAGAAGACAGGCAGAGAAGCAGCACTGTTTATCGTGCCATCAGTTGT  
 CAAAGATAATACTAAATATGCATATACTCTGGATGCCAATTTTTTACTGCTTACAAGATATTATGAGA  
 GTTTGTAGTGAATCCAGTACTCACTTTGCAACACTTACAGCAAGGATGTTAATAGCCTTGGATAAGTGGT  
 TAGATGAACGTCATGCGCAGTCTCACTTTATTCCAGCTTTATTCCGACCTTCTCCCCTTGAACGGATAAA  
 GACAAATGTCATAAACCTGCGTATGCTGCTGAATTAGGCCAGGTAGACAATTCACTACATATGGGCTAT  
 AGTGCCTAGAAAATAAAGAGTAAAATGCTAGCCCTAGAGAAAGCAGACACCTGCATTTACAACCCCTTGT  
 TTGGATCAGATCTTCAGTATACAATCGGGTAGATAAAAGTGGTAATAAATCCATACTTTGGTCTCGGAGC  
 TCCAGACTACTCAAAAATCCAAATCCCAAACAGGAAAAATGGCAGCGAAGCATGAGCAGCGTTGTGGAA  
 GACAAAGAACGACAGTGGGTTGATGACTTTCTTTACATCGAAATGCCTGTGAAGGAGATTCAGAATTAC  
 TGAGCCATCTTCTCGATAAAGGACTTTCACTCAACCACTAGATAATGACCACTGGGCACCCATTTCATTA  
 TGCATGCTGGTATGGAAAAGTTGAGGCCACTCGCATATTATTAGAGAAAGGAAAGTGAATCCAAACCTT  
 TTAATGGGCAGCTCAGCTCACCCTTCACTTTGCTGCTGGAGGCGCCATGCTGAAATAGTGCAGATCC  
 TCCTGACTCACCAGACATTGACAGGCACATAACAGATCAACAAGGAAGATCCCCATTAATGTTTGTGA  
 AGAAAACAAACAAAATAAAGTGGGAAGAAGCTGCAAAATTTGTTGAAAGACGCCATTAACAAGCCATATGAA  
 AAAGTTTGAATCTATAGAATGGATGGATCATACCGTTCTGTTGAACTAAAGCATGGCAATATACCACAG  
 CACAGCAGATAATGGAGGGAATGCGGCTCTCTCAGGAACTCAGCGATATTTCACTATTTGGATCTGTTT  
 AGAAAACTTAGTCTTCAAGCTTATCATAAACCCCTTGAACAAGTTCATGACTGGCCAGAAATA  
 CTTGCTGAATTGACTAATTTGGATCCACAAGAGAAACACCACAGCTTTTCTAAGAAGAGATGTGGGAC  
 TTCCTTTAGAAGTTGAGAAAAAGATTGAAGACCCACTAGCTATTCTTATTCTCTTTGATGAAGCCAGATA  
 TAATTTACTGAAGGGCTTTTATACAGCTCCTGATGCTAACTGATAACACTGGCAAGTCTACTGTTACAA  
 ATAGTTTATGGGAATTATGAGAGTAAAAAGCACAAACAAGGTTTCTTAAATGAAGAACTCTGAAATCCA  
 TCGTACCTATTACTAACTGAAAAGTAAGGCGCCTCACTGGATAAACCGAATACTCCATGAGTACAAGAA  
 TCTGAGTCTGAGTGAAGGCGTCAGTAAGGAAATGCACCACCTGCAGCGCATGTTCTACAGAACTGCTGG  
 GAGATCCCTACGTACGGAGCCGCTTCTTACAGGACAGATATTTACAAAGGCAAGCCCAAGCAATCATA  
 AAGTCAATCCCTGTGTATGTAGGAGTGAATATAAAGGACTTCACTCTCTGAAACATGGAACTAAGGCATT  
 ACTCATCAGTCTCAAGTACTGTTGCTTTACGTGGCAGCTGGGAGATGCTGGTACTTGTTTTCAAATCCAT  
 AGTATGGAAAATAAATGAGCTTTATAGTACACACAAAACAGGCTGGCCTTGTGGTAAAGCTGCTAATGA  
 AGTTAAATGGACAACATAATGCCCTCTGAAAGAAATTC**TGA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI

**ACCN:** NM\_030675

**Insert Size:** 2211 bp

**OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

|                               |   |
|-------------------------------|---|
| <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>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> <p>Transcript Variant: This variant (1) encodes the longer isoform (1). Isoform 1 is also known as Krit1A.</p> |