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Product datasheet for MG226178

Krit1 (NM_001170552) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Krit1 (NM_001170552) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Krit1
Synonyms:	2010007K12Rik; A630036P20Rik; AA432855; AI450393; AI643869; BB155247; BB235701; Ccm1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

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ORF Nucleotide Sequence:

>MG226178 representing NM_001170552
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

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AAGTCATCCCTGTGTATGTAGGAGTGAATATAAAAGGACTTCATCTCCTGAACATGGAAACTAAGGCTGG
CCTTGTGGTAAAGCTGCTAATGAAGTTAAATGGACAACTAATGCCCTCTGAAAGAAATTCA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

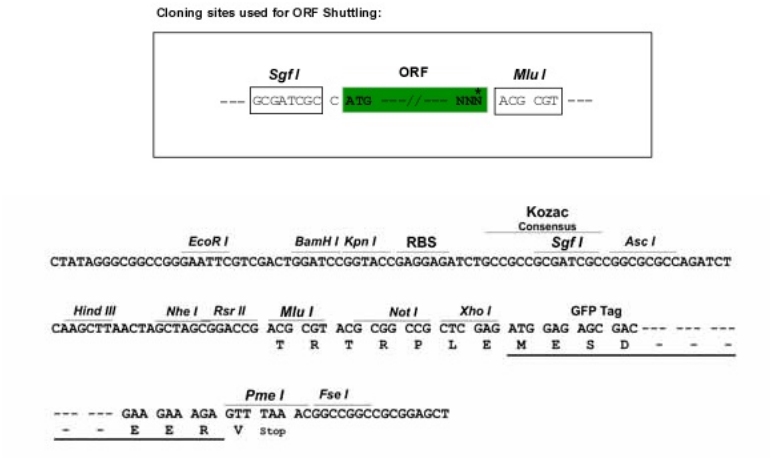
>MG226178 representing NM_001170552
Red=Cloning site Green=Tags(s)

MGNPENIEDAYVAVIRPKNTASLNSREYRAKSYEILLHEVPIEGQKKKRKKVLLETKLQSNSEIAQGILD
YVVETTKPISPANQGIKGKRVVLMRKFPLDGEKTGREAALFIVPSVVKDNTKYAYTPGCPIFYCLQDIMR
VCSESSTHFATLTARMLIALDKWLDERHAQSHFIPALFRPSPLERIKTNVINPAYAAELGQVDNSLHMGY
SALEIKSKMLALEKADTCIYNPLFGSDLQYTNRVDKVVINPYFGLGAPDYSKIQIPKQEKWQRSMSSVVE
DKERQWVDDFPLHRNACEGDSELLSHLLDKGLSVNQLDNDHWAPIHYACWYGKVEATRILLEKGKCNPNL
LNGQLSSPLHFAAGGGHAEIVQILLTHPDIDRHITDQQGRSPLNVCEENKQNNWEEAAKLLKDAINKPYE
KVRIYRMDGSYRSVELKHGNNTTAQQIMEGMRLSQETQRYFTIWICSENLSLQFKPYHKPLQQVHDWPEI
LAELTNLDPQRETPQLFLRRDVGLPLEVEKKIEDPLAILILFDEARYNLLKGFYTAPDAKLITLASLLLQ
IVYGNYESKKHKQGFLNEETLKSIVPITKLKSKAPHWINRILHEYKNLSLSEGVSKEMHHLQRMFLQNCW
EIPTYGAAFFTGQIFTKASPSNHKVIPVYVGVNIKGLHLLNMETKAGLVVKLLMKLNGQLMPSERNS

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001170552

ORF Size: 2091 bp

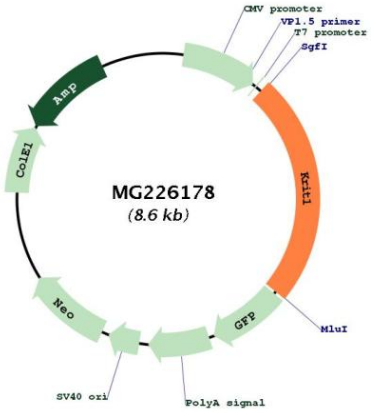
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

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_001170552.1, NP_001164023.1
RefSeq Size:	6034 bp
RefSeq ORF:	2094 bp
Locus ID:	79264
UniProt ID:	Q6S5J6
Cytogenetics:	5 2.26 cM
Gene Summary:	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]

Product images:



Circular map for MG226178