

Product datasheet for **MG224143**

Rock1 (NM_009071) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Rock1 (NM_009071) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Rock1
Synonyms:	1110055K06Rik; Rock-1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG224143 representing NM_009071 Red=Cloning site Blue=ORF Green=Tags(s)

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GCC**CGATCGCC**

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CTACAACATAGAATTAATGAGTACCAAAGAAAAGTGGAAACAGGAAAATGAGAAGAGAAGAAATATAGAAA
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 GT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG224143 representing NM_009071
 Red=Cloning site Green=Tags(s)

MSTGDSFETRFEKIDNLLRDPKSEVNSDCLLDGLDALVYDLDFPALRKNKNIDNFLSRYKDTINKIRDLR
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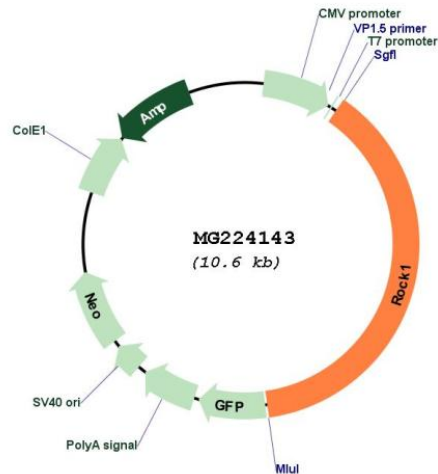
TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



Plasmid Map:


ACCN: NM_009071

ORF Size: 4062 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_009071.2](#), [NP_033097.1](#)

RefSeq Size: 6187 bp

RefSeq ORF: 4065 bp

Locus ID: 19877

UniProt ID: [P70335](#)

Cytogenetics: 18 A1

Gene Summary:

Protein kinase which is a key regulator of actin cytoskeleton and cell polarity. Involved in regulation of smooth muscle contraction, actin cytoskeleton organization, stress fiber and focal adhesion formation, neurite retraction, cell adhesion and motility via phosphorylation of DAPK3, GFAP, LIMK1, LIMK2, MYL9/MLC2, PFN1 and PPP1R12A. Phosphorylates FHOD1 and acts synergistically with it to promote SRC-dependent non-apoptotic plasma membrane blebbing. Required for centrosome positioning and centrosome-dependent exit from mitosis. Plays a role in terminal erythroid differentiation. Promotes keratinocyte terminal differentiation (By similarity). Phosphorylates JIP3 and regulates the recruitment of JNK to JIP3 upon UVB-induced stress. Acts as a suppressor of inflammatory cell migration by regulating PTEN phosphorylation and stability. Acts as a negative regulator of VEGF-induced angiogenic endothelial cell activation. Involved in osteoblast compaction through the fibronectin fibrillogenesis cell-mediated matrix assembly process, essential for osteoblast mineralization. May regulate closure of the eyelids and ventral body wall by inducing the assembly of actomyosin bundles.[UniProtKB/Swiss-Prot Function]