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Product datasheet for RC219093

Epac1 (RAPGEF3) (NM_001098531) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Epac1 (RAPGEF3) (NM_001098531) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Epac1
Synonyms:	bcm910; CAMP-GEFI; EPAC; EPAC1; HSU79275
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC219093 representing NM_001098531
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAAGGTGGGCTGGCCAGGTGAGAGCTGCTGGCAGGTGGGCCTGGCTGTGGAGGATAGCCCAGCTCTGG
GAGCACCGCGGGTGGGAGCCCTCCCTGACGTGGTGCCGGAGGGGACACTACTCAACATGGTGTTGAGAAG
GATGCACCGGCCCCGAAGCTGCTCCTACCAGCTGCTGCTGGAGCACCAGCGTCCGAGCTGCATCCAGGGG
CTGCGCTGGACACCACTCACCAACAGCGAGGAGTCCCTGGATTTCAGCGAGAGCCTGGAGCAGGCCTCCA
CAGAGCGGGTGCTCAGGGCTGGGAGGCAGCTGCATCGGCATCTGCTGGCCACCTGCCCAAACCTCATCCG
AGACCGGAAGTACCACCTTAGGCTCTATCGGCAGTGCTGCTCTGGCCGGGAGCTGGTGGATGGGATCTTG
GCCCTGGGACTTGGGGTCCATTCCCGGAGCCAAGTTGTGGGAATCTGCCAGGTGCTGCTGGATGAAGGTG
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AGCGGCTGTTCTGCTCTTTGAACCACACAGCAAGGCAGGGACCGTGTTGTTCAGCCAGGGGGACAAGGGC
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GCAAAGACCATGCGGCTGGAAGAACATGGCAAAGTGGTGCTGGTGCTGGAGAGAGCCTCTCAGGGCGCCG
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CACACCTGGGAGCGGCTGCCTCACAAAGTCCGGAAGCTGTACTCCGCCCTCGAGAGGCTGCTGGATCCCT
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TCTTCTCAAAGACATGACCTTCATTCATGAGGGAAACCACACACTAGTGGAGAATCTCATCAACTTTGAG
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CAGCGGGAACTCTCCCGCCTCTCCCGAGAGCTGGAGCCA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC219093 representing NM_001098531
Red=Cloning site Green=Tags(s)

MKVGWPGESCWQVGLAVEDSPALGAPRVGALPDVVPEGTLLNMVLRRMHRPRSCSYQLLLEHQRPSCIQG
LRWTPLTNSEESLDFSESLEQASTERVLRAGRQLHRHLLATCPNLIRDRKYHLRLYRQCCSGRELVDGIL
ALGLGVHSRSQVVGICQVLLDEGALCHVKHDWAFQDRDAQFYRFPGPEPEPVGTHEMEEELAEAVALLSQ
RGPDALLTVALRKPPGQRTDEELDLIFEELLHIKAVAHLSNSVKRELAAVLLFEPHSKAGTVLFSQGDKG
TSWYIIWKGSVNVVTHGKGLVTTLHEGDDFGQLALVNDAPRAATIILREDNCHFLRVDKQDFNRIIKDVE
AKTMRLEEHGKVVLVLERASQGAGPSRPPTPGRNRYTVMSGTPEKILELLLEAMGPDSSAHDPTETFLSD
FLLTHRVFMPSAQLCAALLHHFHVEPAGGSEQERSTYVCNKRQQILRLVSQWVALYGSMLHTDPVATSFL
QKLSDLVGRDTRLSNLLREQWPERRRCHRLENGCGNASPQMKARNLPVWLPNQDEPLPGSSCAIQVGDKV
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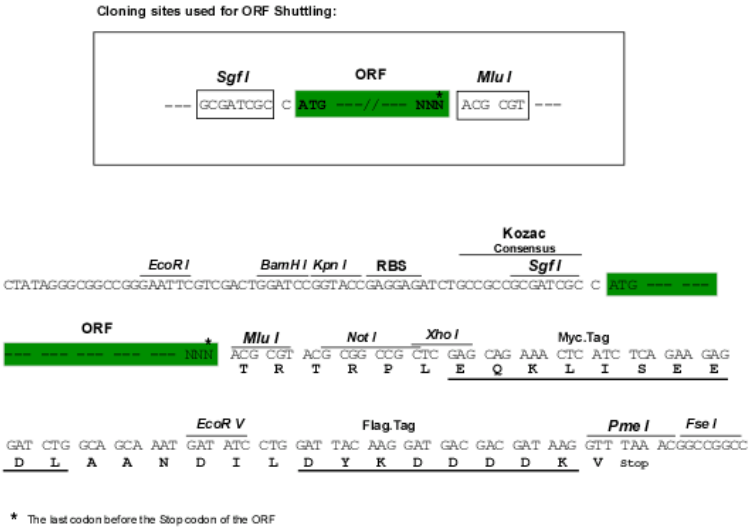
TANLERFMRRFNELQYWVATELCLCPVPGPRAQLLRKFIKLAAHLKEQKNLNSFFAVMFGLSNSAISRLA
HTWERLPHKVRKLYSALERLLDPSWNHRVYRLALAKLSPPVIPFMPLLLKDMTFIHEGNHTLVENLINFE
KMRMMARAARMLHHCRSHNPVPLSPLRSRVSHLHEDSQVARISTCSEQSLSTRSPASTWAYVQQLKVIDN
QRELSRLSRELEP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/ja2536_f01.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



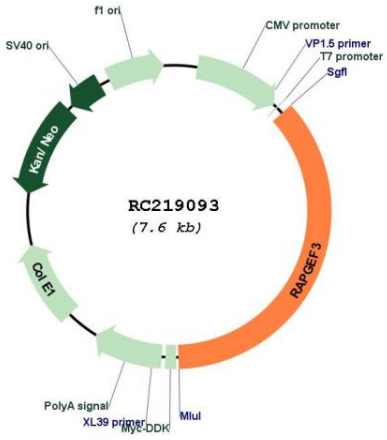
ACCN: NM_001098531

ORF Size: 2769 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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_001098531.3
RefSeq Size:	6239 bp
RefSeq ORF:	2772 bp
Locus ID:	10411
Cytogenetics:	12q13.11
Protein Pathways:	Leukocyte transendothelial migration, Long-term potentiation
MW:	104.1 kDa

Gene Summary: Guanine nucleotide exchange factor (GEF) for RAP1A and RAP2A small GTPases that is activated by binding cAMP. Through simultaneous binding of PDE3B to RAPGEF3 and PIK3R6 is assembled in a signaling complex in which it activates the PI3K gamma complex and which is involved in angiogenesis. Plays a role in the modulation of the cAMP-induced dynamic control of endothelial barrier function through a pathway that is independent on Rho-mediated signaling. Required for the actin rearrangement at cell-cell junctions, such as stress fibers and junctional actin.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RC219093