

Product datasheet for **RC205335**

Epac2 (RAPGEF4) (NM_007023) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Epac2 (RAPGEF4) (NM_007023) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Epac2
Synonyms:	CAMP-GEFII; CGEF2; EPAC; EPAC 2; EPAC2; Nbla00496
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC205335 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGTCGCTGCGCAGCTGCCATTCTTCTCCTCTGCCGAGTGGATCGCCTGCCTGGATAAAAGACCAC
TGGAGCGATCCAGCGAAGATGTGGATAAATCTTCACTCGACTGAAAGAAGTTAAAGCTTTTGAGAAATT
TCACCAAATCTCCTTCATCAGATTTGCTTATGTGGTTATTATGAGAATCTGGAAAAGGGAATAACATTA
TTTCGCCAGGGTGATATTGGAACAACTGGTATGCTGCTCCTGGCAGGGTCTTTGGATGTTAAAGTATCTG
AGACCAGCAGTCACCAGGATGCTGTGACCATCTGTACCCTGGGAATTGGGACGGCCTTTGGAGATCCAT
TCTGGACAACACACCCCGCCATGCAACCATCGTTACCAGGGAGAGCAGTGAAGTCTCCGCATCGAGCAG
AAGGACTTCAAGGCACTATGGGAGAAATATCGACAGTATATGGCAGGACTTCTGGCTCCTCTTATGGTG
TTATGGAAACGGGCTCTAACAATGACAGGATTCCTGACAAGGAGAACACACCTCTCATTGAACCTCACGT
TCCTCTTCGTCCTGCTAACACCATTACCAAGGTCCTTCAGAGAAGATCCTCAGAGCTGGAAAAATTTTA
CGAAATGCCATTCTCTCGAGCACCTCACATGATAAGAGATAGAAAATACCACCTAAAGACATACAGAC
AATGCTGTGTGGAACTGAAGTGGTGGACTGGATGATGCAGCAGACACCATGTGTTCACTCCCGGACTCA
AGCTGTTGGCATGTGGCAAGTCTGTTAGAAGATGGTGTCTCAACCACGTGGACCAGGAGCACCATTTCA
CAAGCAAATATTTATTCTATCGATTTCTGGATGATGAGCAGAGGATGCCCTTTGCTACTGAGGAGG
AGAAGAAGGAGTGTGATGAGGAGCTCCAGGACACCATGCTGCTGCTGCACAGATGGGCCCCGACGCCCA
CATGAGGATGATCCTTCGCAAACACCTGGCCAGAGGACTGTGGATGACCTAGAGATTATCTATGAGGAG
CTTCTTCATATTAAGCCTTATCCCATCTTTCTACCACAGTGAACGAGAGTTAGCAGGTGTTCTCATT
TTGAGTCTCACGCCAAAGGAGGGACTGTGTTGTTAAACCAGGGGAAGAAGGTACCTCCTGGTACATTAT
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TTCGGCAAGTTAGCACTAGTGAATGATGCCCCACGAGCTGCCTCTATCGTCTTACGAGAAGATAACTGCC
ATTTCTTAAGAGTAGACAAGGAGATTTCAACCGATCCTAAGGGACGTGGAGGCGAATACAGTCAGACT
TAAAGAACATGACCAAGATGTCTTGGTGTGGAGAAGGTCCAGCAGGGAACAGAGCTTCTAATCAAGGA



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AACTCACAGCCTCAGCAAAAGTATACTGTGATGTCAGGAACACCTGAAAAATTTTAGAGCATTTTCTAG
 AAACAATACGCCTTGAGGCAACTTTAAATGAAGCAACAGATTCTGTTTTAAATGACTTTATTATGATGCA
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ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC205335 protein sequence
 Red=Cloning site Green=Tags(s)

MVAHAHSSSSAEWIACLDKRPLERSSEVDIIFTRLKEVKAFEKFNHLLHQICLCGYENLEKGITL
 FRQGDIGTNWYAVLAGSLDVKVSSETSSHQDAVTICTLGIGTAFGESILDNTPRHATIVTRESSELLRIEQ
 KDFKALWEKYRQYMAGLLAPPYGMETGSNNDRIIPDKENTPLIEPHVPLRPANTITKVPSEKILRAGKIL
 RNAILSRAPHMIRDRKYHLKTYRQCCVGTGLVDWMMQQTCPVHSRTQAVGMWQVLLLEDGVLNHVDQEHF
 QDKYLFYRFLDDEHEDAPLPTTEEEKKECDEELQDTMLLLSQMGPDAHMRMILRKPPGQRTVDDLEIIEE
 LLHIKALSHLSTTVKRELAGVLIFESHAKGGTVLFNQGEETSWYIILKGSVNVVIYKGVVCTLHEGDD
 FGKLALVNDAPRAASIVLREDNCHFLRVDKEDFNRIIRDVEANTVRLKEHDQDVLVLEKVPAGNRASNQG
 NSQPQQKYTVMSGTPEKILEHFLETIRLEATLNEATDSVLNDFIMMHCVFMPNTQLCPALVAHYHAQPSQ
 GTEQEKM DYALNNKRRVIRLVLQWAAMYGDLLQEDDVSMFL EEFYVSVSDDARMI AALKEQLPELEKIV
 KQISEDAPQKKHKVLLQQFNTGDERAQRQPIRGSDEVLFKVVYCMDPTYTTIRVPVATSVKEVISAVA
 DKLGSSEGLIIVKMSGGKVVLPNDVSVFMTLTINGRFLACPREQFDSLTPLEQEPTVGTGTFEL
 MSSKDLAYQMTIYDWELFNCVHELELIYHTFGRHNFKKTANLDLFLRRFNEIQFVWVTEICLCSQLSKR
 VQLLKKFIKIAAHCKEYKNLNSFFAIVMGLSNVAVSRLALTWEKLP SKFKK FYAEFESLMDPSRNHRAYR
 LTVAKLEPPLIPFMPLLIKDMTF THEGNKTFIDNLVNF EKMRMIANTARTVRYRSQPFNPDAQAANKNH
 QDVRSYVRQLNVIDNQRTLSQMSHRLPRRP

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6256_d03.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:



ACCN: NM_007023

ORF Size: 3033 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.

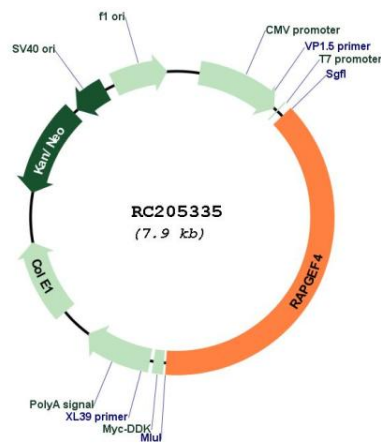
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in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

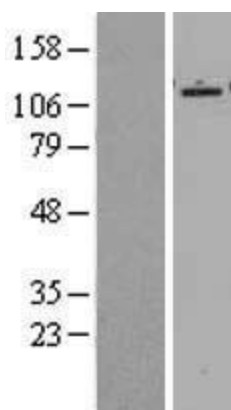
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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_007023.4](#)
- RefSeq Size:** 4361 bp
- RefSeq ORF:** 3036 bp
- Locus ID:** 11069
- UniProt ID:** [Q8WZA2](#)
- Cytogenetics:** 2q31.1
- Domains:** DEP, cNMP, RasGEFN, RasGEF
- Protein Pathways:** Leukocyte transendothelial migration
- MW:** 115.5 kDa
- Gene Summary:** Guanine nucleotide exchange factor (GEF) for RAP1A, RAP1B and RAP2A small GTPases that is activated by binding cAMP. Seems not to activate RAB3A. Involved in cAMP-dependent, PKA-independent exocytosis through interaction with RIMS2 (By similarity).[UniProtKB/Swiss-Prot Function]

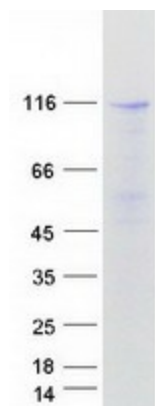
Product images:



Circular map for RC205335



Western blot validation of overexpression lysate (Cat# [LY416236]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC205335 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified RAPGEF4 protein (Cat# [TP305335]). The protein was produced from HEK293T cells transfected with RAPGEF4 cDNA clone (Cat# RC205335) using MegaTran 2.0 (Cat# [TT210002]).