

Product datasheet for **RC226027**

Ephexin 1 (NGEF) (NM_001114090) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ephexin 1 (NGEF) (NM_001114090) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Ephexin 1
Synonyms:	ARHGEF27; EPHEXIN
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC226027 representing NM_001114090
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGAGCTGCTGGCCGCTGCCTTCAGCGCCGCTGCGCCGTGGACCACGACAGTTCACCTCGAAAGCG
 ACGCGCGGACTCGGCGCGGGACACTGCCCGCAGTGAGTCGTCTCCACCCGGAAATGGGGCCAC
 GCCGAGGAGTGGCCGGCCCTGGCCGACAGCCCACCACGCTCACCGAGGCCCTGCGGATGATCCACCC
 ATCCCGCGACTCCTGGAGAACTCATTGAACAAATAGGGCTCCTGTATCAGGAATACCGAGATAAAT
 CGACTCTCAAGAAATCGAAACCAGGAGCAACAGGATGCAGAAATAGAAGACAATACCAATGGTCCCC
 GGCCAGTGAAGACACCCCGAGGAGGAAGAAGAAGAGGAGGAGGAGGAGCCGCCAGCCACCAGAG
 AGGAAGACTCTGCCCAGATCTGCCTGCTCAGTAACCCCACTCAAGTTCAACCTCTGGCAGGATCTC
 CCGAGATCCGGAGCAGCGGGTGTGAGATCCTACAGCCCGAGGAGATTAAGCTGCAGGAGGCCATGTT
 CGAGCTGGTCACTCCGAGGCGTCTACTACAAGAGTCTGAACCTGCTCGTGTCCCACTTCATGGAGAAC
 GAGCGGATAAGGAAGATCCTGCACCCGTCGAGGCGCACATCCTTTCTCCAACGTCCTGGACGTGCTGG
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 CAGGAGCGGACCTATAAGCAGCTGCTCCAGGAGAAGGCAGCTTTCCGGGAGCTGATCGCGCAGCTAGAGC
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 CAAGCTGTTGGTCCAGAACATCCTGAAGAGGGTGAAGAGAGGCTGAGCGGGAGTGCAGTCTTTGGAT
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 GCTGCTGAAGCAGGGTGAAGTGCAGCAGATGTCAGGCCCAAGACCTCCCGGACCCCTGAGGACCAAGAAG
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 AGTACCAGGTATTTGACTCAGCTCCGCGGGGACTGCTGCGTGTGGAGGAGCTGGAGGACCAGGGCCAGAC
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 GCGTCTCTCAGAGTGAAGCAGCTGGATGACCTCACTGGCCCCAACAGGAGGACCAAGTTTGT
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 CGAGCTGACGCTGGAGCTCGCCGACATCCTCAACATCCTGGACAAGACTGACGACGGGTGGATCTTTGGC
 GAGCGTCTGCACGACCAGGAGAGAGGCTGGTCCCCAGTCCATGACTGAGGAGATCTTGAATCCCAAGA
 TCCGGTCCAGAACCTCAAGGAATGTTTCCGTGTCACAAAGATGGATGACCTCAGCGCAGCCAGAACAA
 GGACCGCAGGAAGCTGGGAGCCGGAATCGGCAA

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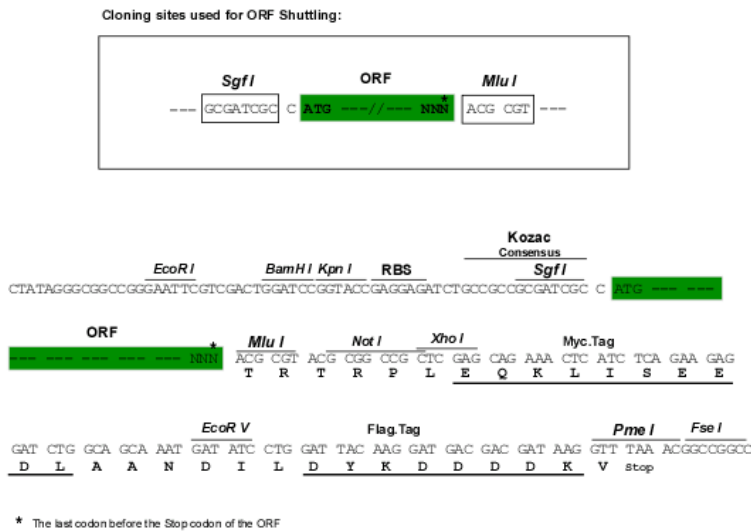
Protein Sequence:

>RC226027 representing NM_001114090
 Red=Cloning site Green=Tags(s)

MELLAAAFSAACAVDHDSSSTSESDARDSAAGHLPGESSSTPGNGATPEEWPALADSPTTLTEALRMIHP
 IPADSWRNLIIEQIGLLYQEYRDKSTLQEIETRRQQDAEIEDNTNGSPASEDTPEEEEEEEEEEPASPPE
 RKTLPPQICLLSNPHSRFNLWQDLPEIRSSGVLEILQPEEIKLQEAMFELVTSEASYKSLNLLVSHFMEN
 ERIRKILHPSEAHILFSNVLDLAVSERFLELEHRMEENIVISDVCDIVYRYAADHFSVYITYVSNQTY
 QERTYKQLLQEKAAFRELIAQLELDPKCRGLPFSSFLILPFQRIITRLKLLVQNILKRVEERSERECTALD
 AHKELEMVVKACNEGVRKMSRTEQMISIQKMEFKIKSVPIISHSRWLLKQGELQMQMSGPKTSRTLRTKK
 LFHEIYLFNFNDLLVICRQIPGDKYQVFD SAPRGLLRVEELEDQGQTLANVFILRLENADDREATYMLK
 ASSQSEMKRWMTSLAPNRRTKFVSFTSRLLDPCPVQCVHPYVAQQPDEL TLELADILNILDKTDGWIWF
 ERLHDQERGWFPSSMTEEILNPKIRSQNLKECFRVHKMDDPQRSQNKDRRKLGSRRNQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8069_h11.zip
 Restriction Sites: SgfI-MluI
 Cloning Scheme:



ACCN: NM_001114090

ORF Size: 1854 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.

RefSeq: [NM_001114090.2](#)

RefSeq ORF: 1857 bp

Locus ID: 25791

UniProt ID: [Q8N5V2](#)

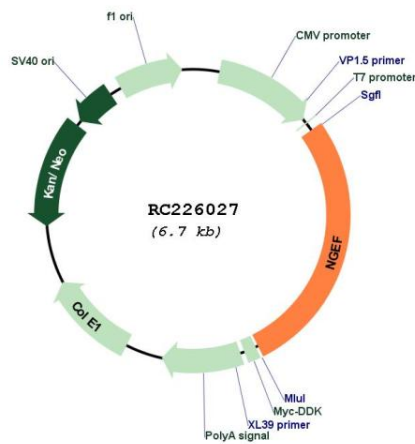
Cytogenetics: 2q37.1

Protein Pathways: Axon guidance

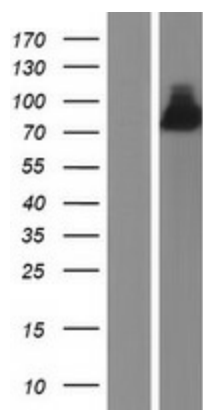
MW: 71.2 kDa

Gene Summary: Acts as a guanine nucleotide exchange factor (GEF) which differentially activates the GTPases RHOA, RAC1 and CDC42. Plays a role in axon guidance regulating ephrin-induced growth cone collapse and dendritic spine morphogenesis. Upon activation by ephrin through EPHA4, the GEF activity switches toward RHOA resulting in its activation. Activated RHOA promotes cone retraction at the expense of RAC1- and CDC42-stimulated growth cone extension (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RC226027



Western blot validation of overexpression lysate (Cat# [LY426444]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC226027 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).