

## Product datasheet for **RG206775**

### Ephexin 1 (NGEF) (NM\_019850) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Ephexin 1 (NGEF) (NM_019850) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Ephexin 1
Synonyms:	ARHGEF27; EPHEXIN
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG206775 representing NM\_019850  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGAGACCAGGGAATCTGAAGATTTGGAAAAGACCCGGAGGAAATCAGCAAGTGATCAATGGAACACTG  
 ATAATGAACCAGCCAAGGTGAAACCTGAGTTACTCCAGAAAAAGAGGAGACTTCTCAAGCTGACCAGGA  
 TATCCAAGACAAAAGACCTCATTGCCACATCCCAATTAAGAGAAAATCCATCTTCAATCGCTCCATAAGA  
 CGCAAAAGCAAAGCCAAGGCCAGAGACAACCCGAACGGAACGCCAGCTGCCTGGCAGATTACAGGACA  
 ATGGAAAATCTGTAATGAGCCCTGACCTTGAATATCCCTGGAGCAGAACGCCCTCTTGAGAACAGC  
 AATGCAGACAGACCAGGAGCCAGGAAATGAGTGAGTCGTCCTCACCCCGGAAATGGGGCCACGCC  
 GAGGAGTGGCCGGCCCTGGCCGACAGCCACCACGCTCACCGAGGCCCTGCGGATGATCACCCCATTC  
 CCGCCGACTCCTGGAGAAACCTCATTGAACAAATAGGGCTCCTGTATCAGGAATACCGAGATAAATCGAC  
 TCTCAAGAAATCGAAACCAGGAGGCAACAGGATGCAGAAATAGAAGACAATACCAATGGGTCCCGGCC  
 AGTGAGGACACCCCGGAGGAGGAAGAAGAAGAGGAGGAGGAGGAGGCCGCGCCAGCCACCAGAGAGGA  
 AGACTCTGCCCCAGATCTGCCTGCTCAGTAACCCCACTCAAGGTTCAACCTCTGGCAGGATCTTCCCGA  
 GATCCGGAGCAGCGGGTGCTTGAGATCTACAGCCTGAGGAGATTAAGTGCAGGAGGCCATGTTCCGAG  
 CTGGTCACTTCCGAGGCGTCTACTACAAGAGTCTGAACCTGCTCGTGTCCCACTTCATGGAGAACGAGC  
 GGATAAGGAAGATCCTGCACCCGTCGAGGCGCACATCTTCTTCAACGTCTGGACGTGTGGTGT  
 CAGTGAGCGGTTCTCTGGAGCTGGAGCAGGATGGAGGAGAACATCGTCATCTCTGACGTGTGTGAC  
 ATCGTGTACCGTTATGCGGCTGACCACTTCTGTCTACATCACCTACGTCAGCAATCAGACCTACCAGG  
 AGCCGACCTATAAGCAGCTGCTCCAGGAGAAGGCAGCTTCCGGGAGCTGATCGCGCAGCTAGAGCTCGA  
 CCCAAGTGCAGGGGGCTGCCCTTCTCCTCCTCCTCATCTGCCTTCCAGAGGATCACACGCCTCAAG  
 CTGTTGGTCCAGAACATCCTGAAGAGGGTGAAGAGAGGTCTGAGCGGGAGTGCCTGCTTTGGATGCTC  
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 GATCAGCATTGAGAAGAAGATGGAGTTCAGATCAAGTCGGTGCCCATCATCTCCCACTCCCGCTGGCTG  
 CTGAAGCAGGGTGGAGCTGCAGCAGATGTCAGGCCCAAGACCTCCCGGACCCTGAGGACCAAGAAGCTCT  
 TCCACGAAATTTACCTCTCCTGTTCAACGACCTGCTGGTGTCTGCCGGCAGATTCCAGGAGACAAGTA  
 CCAGGTATTTGACTCAGCTCCGCGGGACTGCTGCGTGTGGAGGAGCTGGAGGACCAGGGCCAGACGCTG  
 GCCAACGTGTTATCCTGCGGCTGCTGGAGAACGCAGATGACCGGGAGGCCACCTACATGCTAAAGGCGT  
 CCTCTCAGAGTGAGATGAAGCGTTGGATGACCTACTGGCCCCAACAGGAGGACCAAGTTTGTTCGTT  
 CACATCCCGGCTGCTGGACTGCCCCAGGTCCAGTGCCTGCACCCATACGTGGCTCAGCAGCCAGACGAG  
 CTGACGCTGGAGCTCGCCGACATCTCAACATCTGGACAAGACTGACGACGGGTGGATCTTTGGCGAGC  
 GTCTGCACGACCAGGAGAGAGGCTGGTTCCCGAGCTCCATGACTGAGGAGATCTTGAATCCCAAGATCCG  
 GTCCAGAACCTCAAGGAATGTTCCGTGTCCACAAGATGGATGACCCTCAGCGCAGCCAGAACAAAGGAC  
 CGCAGGAAGCTGGGCAGCCGGAATCGGCAA

**ACGCGT**ACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:** >RG206775 representing NM\_019850  
 Red=Cloning site Green=Tags(s)

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METRESEDLKTRRKSASDQWNTDNEPAKVPELLPEKEETSQADQDIQDKEPHCHIPIKRNSIFNRSIR
RKSKAKARDNPERNASCLADSQDNGKSVNEPLTLNIPWSRTPPCRTAMQTDPGAQEMSESSSTPGNGATP
EEWPALADSPTTLTEALRMIHPIPADSWRNLEIQIGLLYQEYRDKSTLQEIETRRQQDAEIEDNTNGSPA
SEDTPEEEEEEEEEEPASPPERKTLPQICLLSNPHSRFNLWQDLPEIRSSGVLEILQPEEIKLQEAMFE
LVTSEASYKSLNLLVSHFMENERIRKILHPSEAHILFSNVLDVLAVERFLLEHRMEENIVISDVCD
IVYRYAADHFSVYITYVSNQTYQERTYKQLLQEKAARELIAQLELDPKCRGLPFSSFLILPFQRITRLK
LLVQNILKRVEERSERECTALDAHKELEMVVKACNEGVRKMSRTEQMISIQKMEFKIKSVPIISHRWL
LKQGELQQMSGPKTSRTLRTKFLFHEIYLFNDLLVICRQIPGDYQVFDAPRGLLRVEELEDQGQTL
ANVFILRLLENADDREATYMLKASSQSEMKRWMTSLAPNRRTKFSVFTSRLLDPCVQVCVHPYVAQPDE
LTLELADILNILDKTDDGWIFGERLHDQERGWFPSSMTEEILNPKIRSQNLKECFRVHKMDDPQRSQNKD
RRKLGSRNRQ
  
```

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_019850

**ORF Size:** 2130 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\\_019850.1](#), [NP\\_062824.1](#)

**RefSeq Size:** 3177 bp

**RefSeq ORF:** 2133 bp

**Locus ID:** 25791

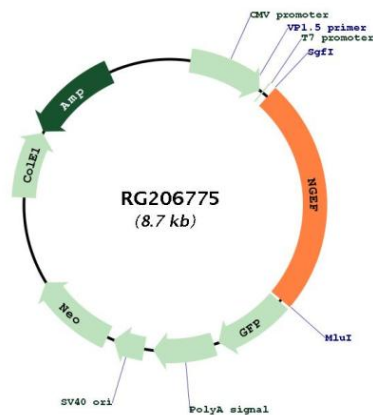
**UniProt ID:** [Q8N5V2](#)

**Cytogenetics:** 2q37.1

**Protein Pathways:** Axon guidance

**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 RG206775