

Product datasheet for **MG210191**

Ngef (BC039279) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ngef (BC039279) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Ngef
Synonyms:	ephexin; Tims2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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Protein Sequence: >MG210191 representing BC039279
Red=Cloning site Green=Tags(s)

METKNSDVGKPKQRKSESSSRKSNHGPAEMRPALPPENREAPETGEETQNEEPRRLIPIQRHSLFNRAVR
 HRHKARSTERRASDQADLPKMGKSVNERSAFNLPQGR LSPWRTPAQRDTGAQEASESSSTPGNGTTPPEE
 CPAL TDSPTTL TEALQMIHP IPADSWRN LIEQIGLL YQEYRDKSTLQE IETRRQQDAEIQGNSDGSQVGE
 DAGEEEEEEEEGEEELASPPERRALPQICLLSNPHSRFNLWQDLPEIQSSGVL DILQPEEIRLQEAMFE
 LVTSEASYKSLNLLVSHFMENERLKKILHPSEAHILFSNVLDVMAVSERFLLLEHRMEENIVISDVCD
 IVYRYAADHFSVYITYVSNQTYQERTYKQLLQEKA AFRELIAQLELDPKCKGLPFSSFLILPFQRITRLK
 LLVQNILKRVEERSEREGTALDAHKELEMVVKACNEGVRKMSRTEQMISIQKKMEFKIKSVPIISHRWL
 LKQGELQQMSGPKTSRTLRTKFLFREIYLFLFNDLLVICRQIPGDKYQVFD SAPRGLLRVEELEDQGQTL
 ANVFILRLL ENADDEATYMLKASSQSEMKRWMTSLAPNRRTKFSVFTSRLLDPCVQVCVHPYVAQQPDE
 LTELADILNILEKTEDGWIFGERLHDQERGWFPSSMTEEILNPKIRSQLKECFRVHKMEDPQRSQNKD
 RRKLGSRNRQ

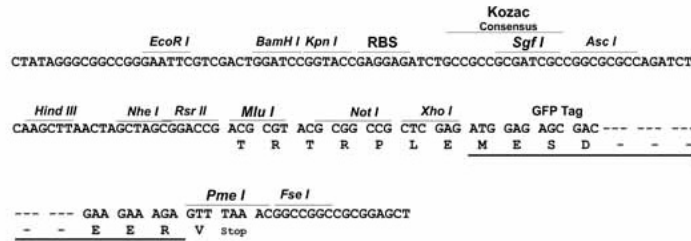
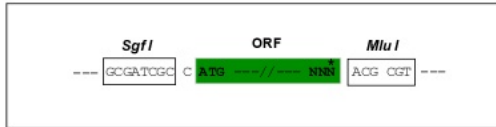
TRTRPLE - GFP Tag - V

Restriction Sites:

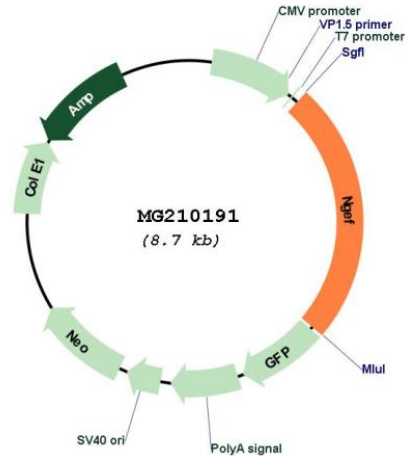
SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: BC039279

ORF Size: 2132 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: [BC039279](#), [AAH39279](#)

RefSeq Size: 3154 bp

RefSeq ORF: 2132 bp

Locus ID: 53972

Cytogenetics: 1 44.42 cM

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.
[UniProtKB/Swiss-Prot Function]