

## Product datasheet for **MR210191**

### **Ngef (NM\_001111314) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Ngef (NM_001111314) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Ngef
Synonyms:	ephexin; Tims2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**Protein Sequence:** >MR210191 protein sequence  
 Red=Cloning site Green=Tags(s)

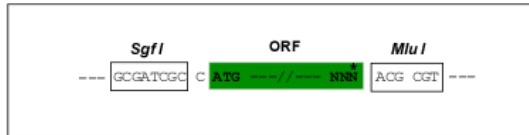
METKNSDVGKPKQRKSESSSRKSNHGPAEMRPALPPENREAPETGEETQNEEPRRLIPIQRHSLFNRAVR  
 HRHKARSTERRASDQADLPKMGKSVNERSAFNLPQGR LSPWRTPAQRDTGAQEASESSSTPGNGTTPPEE  
 CPAL TDSPTTL TEALQMIHIPADSWRN LIEQIGLL YQEYRDKSTLQE IETRRQQDAEIQNSDGSQVGE  
 DAGEEEEEEEEGEEELASPPERRALPQICLLSNPHSRFNLWQDLPEIQSSGVL DILQPEEIRLQEAMFE  
 LVTSEASYKSLNLLVSHFMENERLKKILHPSEAHILFSNVLDMVAVSERFLLELEHRMEENIVISDVCD  
 IVYRYAADHFSVYITYVSNQTYQERTYKQLLQEKA AFRELIAQLELDPKCKGLPFSSFLILPFQRITRLK  
 LLVQNILKRVEERSEREGTALDAHKELEMVVKACNEGVRKMSRTEQMISIQKKMEFKIKSVPIISHRWL  
 LKQGELQQMSGPKTSRTLRTKKLFREIYLFLFNDLLVICRQIPGDKYQVFD SAPRGLLRVEELEDQGQTL  
 ANVFILRLL ENADDEATYMLKASSQSEMKRWMTSLAPNRRTK FVSFTSRLLDPCVQVCVHPYVAQQPDE  
 LTLELADILNILEKTEDGWIFGERLHDQERGWFPSSMTEEILNPKIRSQNLKECFRVHKMEDPQRSQNKD  
 RRKLGSRNRQ

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_001111314

**ORF Size:** 2133 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\\_001111314.1](#), [NP\\_001104784.1](#)

**RefSeq Size:** 3127 bp

**RefSeq ORF:** 2133 bp

**Locus ID:** 53972

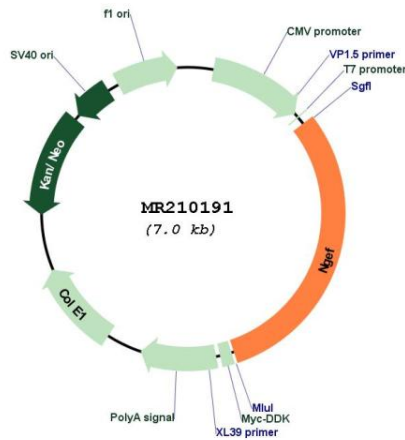
**UniProt ID:** [Q8CHT1](#)

**Cytogenetics:** 1 44.42 cM

**MW:** 82.2 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. [UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MR210191