**OriGene Technologies, Inc.**
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

# Product datasheet for MC220792

## Ngef (NM_001111314) Mouse Untagged Clone

### Product data:

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

**Fully Sequenced ORF:**

>MC220792 representing NM_001111314
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGAGACCAAAAACTCTGAAGACTGGGGGAAACCTCAGAGGAAATCAGAGAGCAGCTCACGGAAAAGCA
ATCATGGCCCAGCTGAGATGAGGCCTGCGTTACCTCCGGAGAACAGGGAGGCACCTGAGACTGGCGAGGA
AACTCAAAACGAAGAACCCCGCCGCCTCATCCCAATCCAGAGGCATTCCCTCTTCAATCGTGCTGTGAGA
CACAGGCACAAGGCCAGGAGCACGTCTGAGCGGAGAGCCAGTGACCAAGCAGATTTGCCAAAAATGGGGA
AATCTGTAAATGAACGGTCGGCCTTCAATCTGCCCCAGGGGAGATTGCCTCCCTGGAGAACACCAGCCCA
GAGGGACACAGGAGCGCAGGAAGCCAGCGAGTCATCCTCCACCCCTGGAAATGGAACCACACCCGAGGAG
TGCCCAGCCCTCACCGACAGCCCCACCACTCTCACGGAGGCCCTGCAGATGATCCATCCCATTCCCGCCG
ACTCCTGGAGAAACCTCATTGAACAAATAGGGCTCCTGTATCAAGAGTATAGAGACAAATCGACTCTCCA
AGAAATTGAAACACGGAGGCAGCAGGATGCAGAAATCCAAGGCAACTCCGATGGGTCCCAGGTTGGGGAA
GACGCTGGAGAGGAGGAGGAGGAGGAGGAGGAGGGAGAGGAGGAGGAGCTGGCCAGCCCTCCTGAGAGGA
GAGCTCTGCCTCAGATCTGCCTGCTCAGCAACCCCCACTCCAGGTTCAACCTCTGGCAAGACCTTCCTGA
GATCCAGAGCAGTGGCGTGCTGGACATTCTCCAGCCGGAGGAGATCAGGCTGCAGGAGGCCATGTTTGAG
TTGGTTACCTCTGAGGCCTCCTACTATAAGAGCCTGAACCTGCTGGTGTCGCACTTCATGGAGAACGAGC
GTCTGAAGAAGATCCTGCATCCATCTGAGGCCCACATCCTCTTTTCCAATGTCCTGGATGTCATGGCTGT
CAGTGAGCGGTTTTTGCTGGAGCTAGAGCACCGCATGGAGGAGAACATTGTTATCTCGGATGTGTGCGAC
ATCGTGTACCGTTACGCAGCTGATCACTTCTCGGTCTATATCACTTACGTCAGTAACCAGACCTACCAGG
AAAGGACATACAAGCAGCTCCTACAGGAGAAGGCCGCTTTCCGGGAACTGATCGCACAGTTGGAGCTGGA
CCCCAAATGCAAGGGCCTGCCTTTCTCCTCCTTCCTCATCTTGCCTTTCCAGAGGATCACGAGACTCAAG
CTGCTGGTCCAGAATATCCTGAAGAGAGTGGAGGAGAGGTCTGAACGTGAAGGCACCGCCTTGGATGCCC
ACAAGGAGCTAGAAATGGTGGTAAAGGCATGCAATGAGGGTGTCCGGAAGATGAGCCGCACAGAACAGAT
GATCAGCATTCAGAAGAAGATGGAGTTCAAGATCAAGTCGGTACCCATCATCTCACACTCCCGGTGGCTG
CTGAAGCAGGGTGAGCTGCAGCAGATGTCCGGCCCCAAGACCTCCCGCACCCTGCGGACCAAGAAGCTCT
TCAGAGAAATTTACCTCTTCCTCTTCAATGACCTGCTGGTGATCTGCCGGCAGATCCCTGGAGACAAGTA
CCAGGTGTTTGATTCGGCCCCAAGGGGCCTGCTTCGAGTGGAGGAGCTGGAGGACCAGGGTCAAACACTG
GCTAATGTGTTCATCCTGCGGCTGCTGGAAAATGCAGATGACCGAGAGGCCACCTATATGCTGAAGGCAT
CCTCCCAGAGCGAGATGAAGCGCTGGATGACCTCACTGGCCCCCAACAGGAGGACCAAGTTTGTATCCTT
CACATCTCGGCTGTTGGACTGTCCCCAGGTCCAGTGTGTGCACCCGTATGTGGCCCAGCAGCCTGATGAA
CTGACGCTGGAACTGGCAGATATCCTGAACATCCTGGAGAAGACAGAGGATGGGTGGATCTTTGGTGAGC
GGCTGCATGACCAGGAGAGAGGCTGGTTCCCCAGTTCCATGACAGAGGAGATCCTGAACCCCAAGATCCG
CTCCCAGAACCTCAAGGAATGTTTCCGGGTACATAAGATGGAAGACCCTCAGCGCAGCCAGAATAAGGAC
CGCAGGAAGCTGGGCAGCCGGAATCGTCAATGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI

**ACCN:** NM_001111314

**Insert Size:** 2133 bp

**OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

| | |
|---|---|
| **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.<br>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.<br>3. Close the tube and incubate for 10 minutes at room temperature.<br>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.<br>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 |
| **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]<br>Transcript Variant: This variant (1) represents the longer transcript and it encodes the longer protein (isoform 1). Sequence Note: The RefSeq transcript and protein were derived from transcript and genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments. |