

## Product datasheet for **MC223476**

### Rest (NM\_011263) Mouse Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Rest (NM\_011263) Mouse Untagged Clone  
**Tag:** Tag Free  
**Symbol:** Rest  
**Synonyms:** 2610008J04Rik; AA407358; NRSF; REST4  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**Fully Sequenced ORF:** >MC223476 representing NM\_011263  
**Red**=Cloning site **Blue**=ORF **Orange**=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCCACCCAGGTGATGGGGCAGTCTTCTGGAGGAGGCAGTCTTTCAACAACAGTGCCAACATGGGCA  
TGGCCTTAACCAACGACATGTACGACCTGCACGAGCTCTCGAAAGCTGAACTGGCAGCCCCTCAGCTCAT  
CATGTTAGCCAACGTGGCCCTGACGGGGGAGGCAAGCGGCAGCTGCTGCGATTACCTGGTCGGTGAAGAG  
AGGCAGATGGCCGAATTGATGCCCGTGGGAGACAACCACTTCTCAGAAAGTGAAGGAGAAGGCCTGGAA  
AGTCGGCTGACCTCAAAGGGCTGGAAAACATGGAAGTGGGAAGTTTGGAGCTAAGTGCTGTAGAACCCCA  
GCCCGTATTTGAAGCCTCAGCTGCCCGAGAAATATACAGCGCCAATAAAGATCCCGCTCCAGAAACACCC  
GTGGCGGAAGACAAATGCAGGAGTTCTAAGGCCAAGCCCTTCCGGTGTAAAGCCTTGCCAGTACGAAGCCG  
AATCTGAAGAGCAGTTTGTGCATCACATCCGGATTCACAGCGCTAAGAAGTTCTTTGTGGAGGAAAGTGC  
AGAGAAACAGGCCAAAGCCTGGGAGTCGGGGTCGTCTCCGGCCGAAGAGGGCGAGTTCTCCAAGGCCCC  
ATCCGCTGTGACCGCTGTGGCTACAATACCAACCGGTATGACCACTACATGGCACACCTGAAGCACCACC  
TGCGAGCTGGCGAGAACGAGCGCATCTACAAGTGCATCATCTGCACGTACACGACGGTCAGCGAGTACCA  
CTGGAGGAAACACCTGAGAAACCAATTTCCCGAGAAAGTCTACACCTGCAGCAAGTGAAGTCACTCTCA  
GACAGAAAAAATAACTACGTTTCAGCACGTGCGAACTCACACAGGAGAACGCCCGTATAAATGTGAACCTT  
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AACGGGCTAAACCTCTTAATTGCCCGCACTGTGACTACAAAACAGCAGATAGAAGCACTTCAAAAAGC  
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AAGCTAAAGAAAACAAAAGAGAGAGGCTGACCTGCTTAATAACGCCGTGAGCAACGAGAAGATGGAGA  
ATGAGCAAAACAAAAGGGGGATGTGTCTGGGAAGAAGAACGAGAAACCTGTAAAAGCTGTGGGAAA  
AGATGCTTCAAAAAGAGAAGAAGCCTGGTAGCAGTGTCTCAGTGGTCCAGGTAACCTACCAGGACTCGGAAG  
TCAGCGGTGGCGGGAGACTAAAGCAGCAGAGGTGAAACACACAGACGGACAACAGGAAACAATCCAG



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AAAAGCCCTGTAAGCCAAGAAAAAAGAAAGAAAGGATGCTGAGGCCATCCCTCCGAAGAGCCTGT
GAACGAGGGACCAGTGACAAAAAGAAAAAGAGTCTGAGTGCAAATCAAAAATCGGTACCAACGTGCCA
AAGGGCGCGCCGAGCGGAGGAGAGGCCGGGGTCAAGAAGCAAAGCGCTTCCCTTAAGAAAGGCACAA
AGAAGACGCCGCCAAGACAAAGACAAGTAAAAAGGTGGCAAATTTGCTCCAAAGGGGATGGGGCAGAC
AGAACCTTCTTGGGGCATTGGCTCAAGTGGGGGTGTCTCCAGACCCTGCCCTCATTAGGCAGAGGTC
ACCGGGTCAGGATCTTCTCAGACAGAGCTTCTTCAACCCATGGATATTGCTAAGTCAGAGCCCGCCAGA
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CCAGGTAGAAGCACCCACTTACCCCAAGCCTCCCAAGGGGGCCTGCCCTCCACGGGGCCTGCCCT
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CGGAGCCTTCCAGAAGGAACCCTCCAGTATGGAGCCTCCCTGCCCGAGGAGCTGCCTCAGGCCGA
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CAGACGGCCCTACGCAGGTTGAGGAGGAGCCCTCCTGTCTCGGAGCCACCTCGGGTGAAGCCAACCA
AAAGATCATCTCCGAAAGACAGAGCAGAGAAGGAGCTGAGCCTGCTGAGTGAGATGGCGCGCAGGA
GCAGGTCCTCATGGGGTGGCTTGGTGCCTGTTAGAGACAGCAAGCTTCTGAAGGAAACAAGAGCGCC
CAGGACCCCGAGCCCAAGTACCATCGCCAAAGGAAACTCGAGGGAAGAGACCCCAAGGACCAAG
AAATGGTCTCTGATGGGGAAGGAATATAGTATCCCTCTCAAGAAAGGAGGACCAGAGGAAGCTGGAGA
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CCAGAGGGTGGAGCATCACACAGCAAGTGTGAGTGGCTCCTCTGGGCTTTGTGACGTGGACACTGAGC
AGAAGACAGATACTGTCCCATGAAAGACTCCGCAGCAGAGCCAGTGTCCCTCTACCCCAACAGTGGAA
CCGTGACGCAGGGTACCAGCTGTAGTGGCCTCCCTCTATCACGTTGGCTGAAACGAGTCTCAGGAA
ATTGATGAAGATGAAGGCATCCATAGCCATGATGGAAGTACCTGAGTGACAACATGTCTGAGGGGAGTG
ACGACTCAGGACTGCACGGGGCTCGGCCGACACCACAGAAGCTACGTCAAAAAATGGGAAGGCAGGGTT
GGCTGGTAAAGTACTGAGGGAGAGTTTGTGTATTTTCTGTGATCGTCTTTTAGAAAGGAAAAAGAT
TATAGCAAAACACCTCAATCGCCACTTGGTGAATGTACTTCTAGAAGAAGCAGCTGAGGAGCAGGAGG
AGCAGGAGGAGCGGGAGGAGCAGGAGTAG
    
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**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** SgfI-MluI
- ACCN:** NM\_011263
- Insert Size:** 3249 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.
  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\\_011263.2](#), [NP\\_035393.2](#)

RefSeq Size:	4266 bp
RefSeq ORF:	3249 bp
Locus ID:	19712
UniProt ID:	<a href="#">Q8VIG1</a>
Cytogenetics:	5 C3.3
Gene Summary:	<p>Transcriptional repressor which binds neuron-restrictive silencer element (NRSE) and represses neuronal gene transcription in non-neuronal cells (PubMed:29961578, PubMed:9771705). Restricts the expression of neuronal genes by associating with two distinct corepressors, SIN3A and RCOR1, which in turn recruit histone deacetylase to the promoters of REST-regulated genes (By similarity). Mediates repression by recruiting the BHC complex at RE1/NRSE sites which acts by deacetylating and demethylating specific sites on histones, thereby acting as a chromatin modifier (By similarity). Transcriptional repression by REST-CDYL via the recruitment of histone methyltransferase EHMT2 may be important in transformation suppression (By similarity). Represses the expression of SRRM4 in non-neuronal cells to prevent the activation of neural-specific splicing events and to prevent production of REST isoform 2 (PubMed:21884984). Repressor activity may be inhibited by forming heterodimers with isoform 2, thereby preventing binding to NRSE or binding to corepressors and leading to derepression of target genes (PubMed:10490617, PubMed:11039732). Also maintains repression of neuronal genes in neural stem cells, and allows transcription and differentiation into neurons by dissociation from RE1/NRSE sites of target genes (PubMed:15907476). Thereby is involved in maintaining the quiescent state of adult neural stem cells and preventing premature differentiation into mature neurons (PubMed:27819263). Plays a role in the developmental switch in synaptic NMDA receptor composition during postnatal development, by repressing GRIN2B expression and thereby altering NMDA receptor properties from containing primarily GRIN2B to primarily GRIN2A subunits (By similarity). Acts as a regulator of osteoblast differentiation (PubMed:25727884). Key repressor of gene expression in hypoxia; represses genes in hypoxia by direct binding to an RE1/NRSE site on their promoter regions (By similarity). May also function in stress resistance in the brain during aging; possibly by regulating expression of genes involved in cell death and in the stress response (PubMed:24670762). Repressor of gene expression in the hippocampus after ischemia by directly binding to RE1/NRSE sites and recruiting SIN3A and RCOR1 to promoters of target genes, thereby promoting changes in chromatin modifications and ischemia-induced cell death (By similarity). After ischemia, might play a role in repression of miR-132 expression in hippocampal neurons, thereby leading to neuronal cell death (By similarity).[UniProtKB/Swiss-Prot Function]</p>