

## Product datasheet for **MC224128**

### Sin3a (NM\_001110350) Mouse Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Sin3a (NM\_001110350) Mouse Untagged Clone  
**Tag:** Tag Free  
**Symbol:** Sin3a  
**Synonyms:** AW553200; mKIAA4126; mSin3A; Sin3  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**Fully Sequenced ORF:** >MC224128 representing NM\_001110350  
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**GCGATCGCC**

ATGAAGCGACGTTTGGATGACCAGGAATCACCAGTGTATGCAGCCAGCAGCGAAGGATTCCTGGGAGCA  
CAGAGGCTTTTTCTCACCAGCACCGGGTCTTGCCCCGGCCCTCCTGTGTATGAAGCAGTGTCTGAGAC  
CATGCAGTCAGCTACAGGCATTCAGTACTCAGTGGCACCAACTACCAGGTTTCAGCTGTGCCACAAAGT  
TCTGGCAGTCATGGGCCCGCCATAGCAGCAGTTTCATAGCAGCCATCATCACCCAACAGCTGTCCAGCCTC  
ATGGAGGCCAGGTGGTCCAGAGCCATGCCACCCAGCACCACAGTTGCACCAGTACAGGGACAGCAGCA  
GTTTCAGAGGCTCAAGGTGGAAGACGCCCTGTCCTATCTTGACCAGGTGAAACTGCAGTTCGGTAGTCAG  
CCTCAGGTCTACAATGATTTCTTGACATCATGAAGGAATTTAAATCTCAGAGCATTGATACTCCAGGAG  
TGATTAGCCGAGTGTCCAGCTATTTAAAGGCCACCCTGATCTGATCATGGGCTTTAACACCTTCTTGCC  
TCCTGGCTACAAAATTGAGGTGCAGACTAATGACATGGTGAACGTGACAACACCTGGCCAAGTTCATCAG  
ATTCCCACCATGGCATCCAGCCCCAGCCTCAGCCACCACCTCAGCATCCTTCCCAGCCTTCATCCCAGT  
CAGCTCCCCTCCTGCTCAGCCAGCTCCTCAGCCACAGCTGCCAAAGTCAGCAAGCCTTCCCACACTACA  
AGCACATACTCCAGCCAGTCAGCAGACTCCCCACTCCCACCATATGCATCCCCAGTTCACCAGTC  
CAGCCTCACACACCAGTGACAATCTCCTTGGGGACAGCTCCATCTTTGCAAAAACAATCAGCCTGTGGAGT  
TTAATCATGCCATCAACTATGTTAATAAGATCAAGAACAGATTCCAGGGCCAACCAGACATCTACAAAGC  
ATTCTTGGAGATTTTGCACACATACCAGAAAGAACAGCGGAATGCCAAGGAAGCTGGAGGAAACTACACT  
CCAGCTTTGACTGAGCAAGAGGTGTATGCCAGGTGGCTCGACTCTTCAAAAACCAGGAAGATTTGTTGT  
CTGAATTTGGACAGTTCCTGCCAGATGCCAACAGCTCAGTGCTTTAAGCAAAAACAAGTCTGAGAAGGT  
TGATTCTGTGAGAAATGACCATGGAGGCACTGTGAAGAAGCCCCAACTGAATAACAAGCCACAGAGGCC  
AGTCAGAAATGGTCCAGATCCGAGGCACTCTGGAACAGGAGCCACACCTCCAGTGAAGAAAAACCCA  
AACTGATGAGTCTAAAAGAGTCTTCAATGGCAGATGCCAGCAAGCATGGTGTGGAACCGGAATCATTATT  
TTTTGATAAGGTTGAAAAGGCTCTTCGGAGTGCAGAGGCCTATGAAAACCTCCTTCGTTGCCTTGTATC  
TTAATCAGGAGGTGATCTCTCGGGCCGAGCTGTACAGTAGTCTCTCCTTTTCTGGGAAATTCCTG



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AATTGTTAATTGGTTAAAACTTTTTGGGCTATAAGGAGTCTGTACATCTGGAAAGCTTTCCAAAGGA  
 ACGAGCTACAGAAGGCATTGCCATGGAGATAGACTATGCCTCTTGTAACGACTGGGCTCTAGCTACCGA  
 GCCCTACCGAAAAGTTACCAGCAGCCCAAGTGCACGGGACGGACTCCTCTGTGTAAGAGGTTTTAAATG  
 ATACCTGGGTTTCCTTCCCATCTTGGTCTGAAGACTCCACTTTTGTAGTTCCAAGAAGACTCAGTATGA  
 AGAACATATTTACCGTTGTGAAGATGAACGATTTGAGCTTGATGTGGTCTTGAGACCAATCTTGCAACA  
 ATCCGGGTTTTAGAAGCAATACAGAAAAAATTTCTCGCTTGCTGTCTGCTGAGGAACAAGCCAAATTCGCT  
 TGGATAACACCCTTGGAGGCACGTCCGAAGTCATCCATCGAAAAGCACTCCAGAGGATATATGCTGACAA  
 AGCAGCTGATATCATCGATGGCCTGAGGAAGAACCCTCCATTGCTGTTCCGATTGCTTTAAAAGGTTG  
 AAGATGAAAGAAGAAGAGTGGCGAGAAGCTCAGAGAGGCTTCAACAAGGTCTGGCGAGAGCAAAATGAGA  
 AGTACTACTTGAAGTCTCTGGATCACCAAGGCATCAACTTCAAGCAGAACGACACTAAGGTCTTGAGGTC  
 TAAGAGCTTACTCAATGAGATCGAGAGCATCTATGACGAGAGGCAAGAGCAGGCTACAGAAGAGAACGCT  
 GGTGTACCTGTTGGCCCGCACCTCTCTTGCCTATGAAGACAAACAGATACTAGAAGATGCTGCTGCTC  
 TGATTATCCACCATGTGAAGAGGCAACAGGCATTAGAAAGAGGACAAATACAAATCAAGCAATCAT  
 GCACCATTTTCCTGACCTGTGTTTGTCTCAGAGAGGCGATCTCTCAGATGTGGAAGAAGAGGAGGAG  
 GAAGAAATGGATGTGGATGAAGCAACAGGAGCACCTAAGAAGCACAATGGTGTGGGGGAGCCCCCTA  
 AGTCCAAGTTGCTATTTAGTAACACAGCAGCTCAAAAAGTTAAGAGGGATGGATGAAGTATAAACCTTTT  
 CTATGTCAATAACAATTGGTATATCTTTATGCGACTGCATCAAATTTCTCTGCTTGAGGCTGCTACGGATT  
 TGTTCCTCAAGCTGAACGGCAAAATGAAGAAGAAAACCGAGAGAGAGAATGGGAACGGGAGGTGCTAGGCA  
 TAAAGCGAGACAAGAGTGATAGTCTGCCATACAACACTACGTCTCAAGGAACCTATGGATGTTGATGTAGA  
 AGATTATTACCCAGCTTTCCTGGACATGGTGGGAGCCTGCTTGATGGCAACATAGACTCATCACAGTAT  
 GAAGATTCAGTGAAGAGATGTTACCATTATGCCTACATTGCCTTTACTATGGACAAATTAATCCAGA  
 GCATCGTCAGACAGCTACAGCACATCGTCAGCGACGAGGCTGTGTGCAGGTTACTGATCTTTACTTGGC  
 AGAAAACAATAACGGAGCCACGGGAGGCCAGCTCAACAGTCAGACTTCAAGGAGCCTTCTGGAGTCAGCA  
 TACCAGCGGAAGGCAGAGCAGCTTATGTCAGATGAGAAGTCTCAAGCTAATGTTCAATCAAAGTCAAG  
 GTCAAGTTCAGCTGACTGTTGAGCTCCTGGACACAGAAGAGGAGAACTCAGATGACCCCGTGAAGCAGA  
 GGTGTGGACACGTTGGTCAGACTACGTGGAGCGATATATGAGTCTGATACTACTTCTCCTGAACTTCGA  
 GAACATCTGGCACAGAAACAGTATTTCTCCCAAGGAATTTGCGGCGTATCCGGAAGTGTCAACGTGGTC  
 GAGAGCAACAGGAAAAAGAGGAAAGAAAGCAAGCAAGAAGACCATGGAAAAATGAGAGAGCCTGGA  
 TAAGCTGGAGTGTAGGTTCAAGCTGAACCTCTAAGATGGTATATGTGATCAAATCGGAGGACTACATG  
 TACCGGAGAACTGCTCTACTCAGAGCTCATCAGTCCCATGAGCGTGTAAAGCAAGCGTCTGCATCAGCGGT  
 TCCAGGCTGGGTGGATAAATGGACCAAGGAGCATGTGCCTCGGAAATGGCAGCAGAGACCAGCAAATG  
 GCTCATGGGTGAGGGGCTCGAGGGCCTGGTACCCTGCACCACCCTGTGATACAGAGACTCTGCACCTT  
 GTGAGCATTAACAATATCGTGTCAAATACGGCACAGTATTCAAAGCCCTTAA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** Sgfl-Mlul
- ACCN:** NM\_001110350
- Insert Size:** 3834 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\\_001110350.1](#), [NP\\_001103820.1](#)

**RefSeq Size:** 5130 bp

**RefSeq ORF:** 3834 bp

**Locus ID:** 20466

**UniProt ID:** [Q60520](#)

**Cytogenetics:** 9 30.89 cM

**Gene Summary:** Acts as a transcriptional repressor. Corepressor for REST. Interacts with MXI1 to repress MYC responsive genes and antagonize MYC oncogenic activities. Also interacts with MXD1-MAX heterodimers to repress transcription by tethering SIN3A to DNA. Acts cooperatively with OGT to repress transcription in parallel with histone deacetylation. Involved in the control of the circadian rhythms. Required for the transcriptional repression of circadian target genes, such as PER1, mediated by the large PER complex through histone deacetylation. Cooperates with FOXK1 to regulate cell cycle progression probably by repressing cell cycle inhibitor genes expression (PubMed:22476904). Required for cortical neuron differentiation and callosal axon elongation (PubMed:27399968).[UniProtKB/Swiss-Prot Function]  
Transcript Variant: This variant (2) differs in the 5' UTR and uses an alternate in-frame splice junction compared to variant 1. The resulting isoform (2) has the same N- and C-termini but is longer compared to isoform 1.