

## Product datasheet for **MC220620**

### Sun2 (NM\_194342) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Sun2 (NM_194342) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Sun2
Synonyms:	B230369L08Rik; C030011B15; Unc84b
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**Fully Sequenced ORF:** >MC220620 representing NM\_194342  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGTGCAGACGAAGCCAGCGCCTACTCGCTACTCTCAGGATGATAACGATGGCGGCAGCAGCAGCAGTG  
 GTGCGAGCTCCGTGGCAGGAAGCCAGGGCACCGTGTAAAGACAGTCCCTCAGGACTTTGAAGAGGAA  
 ATCCAGCAACATGAAGCACCTGTCCCGACTCCACAGCTGGGCCCTCCTCTGACTCCCACACCTCTAC  
 TACAGCGAGTCTGTGGTTCGAGAGTCTACATCGGCAGCCCCGGGCTGTGTCCCTCGCCAGGAGTGCC  
 TCCTGGATGACCACCTACACAGTGAAGCCACTGGAGCGGGGACCTTCGGGGGAGGAGGAGAGGAAC  
 AGGTGGTCTGAGAGCAGCAAGGCCAATGGGCTCACCGCGGAGAGCAAGGCCCTCAGAAGACTTTTCGGA  
 TCTTCTCAGGCTATTCTCAGAGGATGACCTTGACGGCCGCTCTTTGGTCTTCTACTGGTGGATTG  
 GCACCACCTGGTACCGCTGACAACCTGCTCCCTCCTGGATGTCTTCGCTTAACAGGTCAGGCA  
 CTTCTCGTGAACCTGAAGAGTTTTCTGTGGTTCCTTCTGCTCTTCTACTCTGACTGGTCTGACCTAC  
 GGTGCTTGGCATTTCACCCCTTAGGGCTGCAGACATTGCAACCCGCTGTGGTCTCCTGGTGGGCAGCAA  
 AAGAGAGCAGGAAGCAGCCAGAGGTGTGGGAATCCAGAGACGCCCTCCAGCACTCCAGGCTGAGCAGCG  
 CGTTCTCTCCCGGTTCACTCTCTGGAGCGGCTCTGGAAGCCCTTGCTGCAGACTTTTCCTCCAAGTGG  
 CAGAAGGAGGCCATACGGCTGGAACGCCTGGAGCTGCGGCAGGGGGCTGCTGGCCATGGAGGAGGCAGTA  
 GCCTGAGCCATGAAGATGCCCTGTCTCTCTAGAAAGGTTGGTGAAGCCCGCAGGCTACCCTGAAGGA  
 GGACTTGGCAGGACACAGTGGCTCATATCCAGGAAGAATTGGTACCCTGAGGGCAGAGCATCACAA  
 GACTCGGAAGATCTTTCAAGAAGATCGTCCAGGCCTCTCAGGAGTCCGAAGCCGAGTCCAGCAGCTGA  
 AGACAGAATGAAAAGCATGAGCCAGGAGGCCTCCAGGAGAGCTCTGTGAAGGAGCTGGGACGGCTGGA  
 AGCCAGCTGGCCAGCCTGCGGCAGGAGCTGGCTGCCCTGACTCTGAAGCAGAAGCTCGGTGGCAGATGAA  
 GTGGGCTGCTGCCACAGAAGATCCAGGCTGCCAGGGCTGATGTGAATCCAGTTCCTGACTGGATCA  
 GGCAGTTCCTTCTGGAGACAGGGTGCAGCAGCGGGCTCCTGCAGAGAGATGAGATGCACGCTCAGCT  
 GCAGGAGCTGGAGAACAAGATCCTTACCAAGATGGCTGAGATGCAGGGCAAGTCAGCCAGGGAGGCCGCA  
 GCGTCCCTGGGACAGATACTGCAGAAAGAAGGCATAGTTGGGGTGCAGAGGAGCAGGTGCACCGGATCG  
 TCAAGCAGGCCCTGCAGCGCTACAGTGAAGACAGGATTGGAATGGTGGATTACGCCCTGGAATCAGGAGG  
 AGCCAGTGTATCAGCACCCGCTGCTCTGAGACTTATGAGACCAAGACGGCACTCCTCAGCCTCTTTGGC  
 ATCCCCCTGTGGTACCACTCCCAGTCACTCGGGTCATTCTGCAGCCAGATGTGCACCCAGGCAACTGCT  
 GGGCCTTCAGGGGCCAGGGCTTGCAGTGGTCCGCTCTCTGCTCGAATCCGACCTACAGCCGTAC  
 CTTAGAGCACGTGCCAAGGCCTTGTACCCAACAGCACTATCTCCAGTGTCCCAAGGACTTCGCCATC  
 TTTGGCTTCGATGAAGACCTGCAGCAGGAAGGGCACTTCTTGGCACGTTTGGCTACGACCAGGATGGGG  
 AGCCCATCCAGACCTTCTATTTCCAGGCCTTAAGATGGCCACATACCAAGTTGTGGAGCTTCGGATCCT  
 GACCAACTGGGGCCACCCTGAGTACACGTGTATCTACCGTTCGGGTGCACGGAGAGCCTGCCACT**AG**

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** SgfI-MluI
- ACCN:** NM\_194342
- Insert Size:** 2100 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\\_194342.3](#), [NP\\_919323.2](#)

**RefSeq Size:** 3713 bp

**RefSeq ORF:** 2100 bp

**Locus ID:** 223697

**UniProt ID:** [Q8BJS4](#)

**Cytogenetics:** 15 E1

**Gene Summary:** As a component of the LINC (Linker of Nucleoskeleton and Cytoskeleton) complex, involved in the connection between the nuclear lamina and the cytoskeleton. The nucleocytoplasmic interactions established by the LINC complex play an important role in the transmission of mechanical forces across the nuclear envelope and in nuclear movement and positioning. Specifically, SYNE2 and SUN2 assemble in arrays of transmembrane actin-associated nuclear (TAN) lines which are bound to F-actin cables and couple the nucleus to retrograde actin flow during actin-dependent nuclear movement. Required for interkinetic nuclear migration (INM) and essential for nucleokinesis and centrosome-nucleus coupling during radial neuronal migration in the cerebral cortex and during glial migration. Required for nuclear migration in retinal photoreceptor progenitors implicating association with cytoplasmic dynein-dynactin and kinesin motor complexes, and probably B-type lamins; SUN1 and SUN2 seem to act redundantly. The SUN1/2:KASH5 LINC complex couples telomeres to microtubules during meiosis; SUN1 and SUN2 seem to act at least partial redundantly. Anchors chromosome movement in the prophase of meiosis and is involved in selective gene expression of coding and non-coding RNAs needed for gametogenesis. Required for telomere attachment to nuclear envelope and gametogenesis. May also function on endocytic vesicles as a receptor for Rab5-GDP and participate in the activation of Rab5.[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (3) lacks an exon in the 5' coding region, but maintains the reading frame, compared to variant 1. The encoded isoform (3) is shorter than isoform 1.

Sequence Note: The RefSeq transcript and protein were derived from genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments.