

## Product datasheet for **MR231004**

### Sun2 (NM\_001205346) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Sun2 (NM_001205346) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Sun2
Synonyms:	B230369L08Rik; C030011B15; Unc84b
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide  
Sequence:

>MR231004 representing NM\_001205346  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGTGCAGACGAAGCCAGCGCCTACTCGCTACTCTCAGGATGATAACGATGGCGGCAGCAGCAGCAGTG  
GTGCGAGCTCCGTGGCAGGAAGCCAGGGCACCGTGTAAAGACAGTCCTCTCAGGACTTTGAAGAGGAA  
ATCCAGCAACATGAAGCACCTGTCCCGAGCTCCACAGCTGGGCCCTCTCTGACTCCCACACCTCTAC  
TACAGCGAGTCTGTGGTTCGAGAGTCTACATCGGCAGCCCCGGGCTGTGTCCCTCGCCAGGAGTGCC  
TCCTGGATGACCACCTACACAGTGAAGCCACTGGAGCGGGACCTTCGGGGGAGGAGGAGAGGAAAC  
AGGTGGTCTGAGAGCAGCAAGGCCAATGGGCTCACCGCGGAGCAAGGCCCTCAGAAGACTTTTTCGGA  
TCTTCTCAGGCTATTCTCAGAGGATGACCTTGCAAGGCTACACGGACTCAGACCAGCACAGCTCGGGT  
CCAGGTTAAGGAGTGCAGCATCTCGGGCCGGCTCTTTGTCTGGACTCTGGTCACTTTCCAGGCCGCT  
CTTTGGTCTTCTACTGGTGGATTGGCACCACTGGTACCGCTGACAAGTCTGCTCCCTCCTGGAT  
GTCTTCGCTCAACCAGGCACTTCGCTGAACCTGAAGAGTTTTCTGTGGTTCTCTGCTCTTGCTAC  
TCCTGACTGGTCTGACCTACGGTCTGGCATTTCACCCCTTAGGGCTGCAGACATTGCAACCCGCTGT  
GGTCTCCTGGTGGGCAGCAAAAGAGAGCAGGAAGCAGCCAGAGGTGTGGGAATCCAGAGACGCTCCAG  
CACTTCAGGCTGAGCAGCGCTTCTCTCCCGGTTCACTCTCTGGAGCGGCTGTGGAAGCCCTTGCTG  
CAGACTTTTCTCAACTGGCAGAAGGAGGCCATACGGCTGGAACGCCTGGAGTGCAGCAGGGGCTGC  
TGGCAATGGAGGAGCAGTAGCCTGAGCCATGAAGATGCCCTGTCTCTCCTAGAAGGGTTGGTGAAGCC  
CGCAGGCTACCTGAAGGAGACTTGCAGGGACACAGTGGCTCATATCCAGGAAGAATTGGCTACCC  
TGAGGGCAGAGCATCACCAAGACTCGGAAGATCTCTCAAGAAGATCGTCCAGGCCCTCAGGAGTCCGA  
AGCCCCAGTCCAGCAGCTGAAGACAGAATGGAAGCATGACCCAGGAGGCCCTCCAGGAGACTCTGTG  
AAGGAGCTGGGACGGCTGGAAGCCAGCTGGCCAGCCTGCAGCAGGAGTGGTGCCTGACTCTGAAGC  
AGAAGTGGTGGCAGATGAAGTGGGCTGCTGCCACAGAAGATCCAGGCTGCCAGGGCTGATGTGAATC  
CCAGTTCCTGACTGGATCAGGCAGTTCCTTCTGGAGACAGGGTGCAGCAGCGGGCTCCTGCAGAGA  
GATGAGATGCAGCTCAGCTGCAGGAGCTGGAGAACAAGATCCTTACCAAGATGGCTGAGATGCAGGCA  
AGTCAAGCAGGGAGCCGACGCTCCCTGGGACAGATACTGCAGAAAGAAGGCATAGTTGGGGTGCAG  
GGAGCAGGTGCACCGATCGTCAAGCAGGCCCTGCAGCGCTACAGTGAAGACAGGATTGGAATGGTGGAT  
TACGCCCTGGAATCAGGAGGAGCCAGTGTATCAGCACCCGCTGCTCTGAGACTTATGAGACCAAGACGG  
CACTCCTCAGCCTCTTTGGCATCCCCGTGGTACCCTCCAGTCCAGTCCGCTCATTCTGCAGCCAGA  
TGTGCACCCAGGCAACTGCTGGGCTTCCAGGGGCCCCAGGGCTTGCAGTGGTCCGCTCTCTGCTCGA  
ATCCGACTACAGCCGTTACCTTAGAGCAGTGCCCAAGGCCCTGTACCCAACAGCACTATCTCCAGTG  
CTCCCAAGGACTTCGCCATCTTTGGCTTCGATGAAGACCTGCAGCAGGAAGGGACTTCTTGGCAGTT  
TGCTACGACCAGGATGGGGAGCCATCCAGACCTTCTATTTCCAGGCCCTAAGATGGCCACATACCAA  
GTTGTGGAGCTTCGGATCCTGACCAACTGGGGCCACCCTGAGTACACGTGTATCTACCGCTTCGGGTGC  
ACGGAGAGCCTGCCAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR231004 representing NM\_001205346  
 Red=Cloning site Green=Tags(s)

MSRRSQRLTRYSDNDGGSSSSGASSVAGSQGTVFKDSPLRTLKRKSSNMKHLSPAPQLGPSSDSHTSY  
 YSESVVRESYIGSPRAVSLARSALLDDHLHSEPYWSDLRGRRRRGTGGSESSKANGLTAEKASEDFG  
 SSSGYSSEDDLAGYTDSDQHSSGSRLRSAASRAGSFVWTLVTFPGRLFGLLYWWIGTTWYRLTTAASLLD  
 VFVLRHFSLNLKSFLWFLLLLLLTGLTYGAWHFYPLGLQTLQPAVVSWWAAKESRKQPEVWESRDASQ  
 HFQAEQRVLSRVHSLERRLEALAADFSSNWQKEAIRLERLELRQGAAGHGGSSLSHEDALSLLEGLVSR  
 REATLKEDLRRDTVAHIQEELATLRAEHHQDSEDLFKKI VQASQESEARVQQLKTEWKSMTQEAFQESSV  
 KELGRLEAQLASLRQELAALTLKQNSVADEVGLLPQKIQAARADVESQFPDWIRQFLLGDRGARSLLQR  
 DEMHAQLQELNKILTKMAEMQGKSAREAAASLGQILQKEGIVGVTEEQVHRIVKQALQRYSEDRI GMVD  
 YALESGGASVISTRSETYETKTALLSLFGIPLWYHSQSPRVILQPDVHPGNCWAFQGPQGFVAVRLSAR  
 IRPTAVTLEHVPKALSPNSTISSAPKDFAI FGFDEDLQEGTLLGTFA YDQDGEPIQTFYFQASKMATYQ  
 VVELRILTNWGHPEYTCIYRFRVHGEPAH

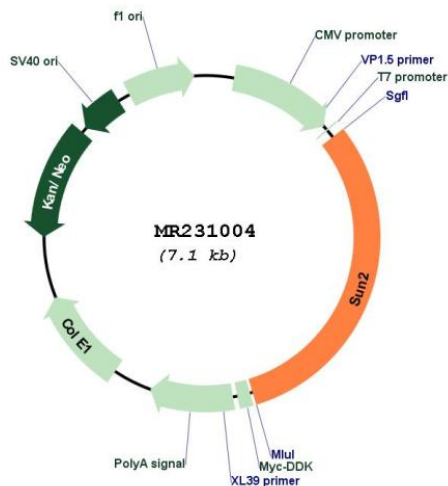
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



**Plasmid Map:**


**ACCN:** NM\_001205346

**ORF Size:** 2187 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\\_001205346.1](#), [NP\\_001192275.1](#)

**RefSeq Size:** 3803 bp

**RefSeq ORF:** 2190 bp

**Locus ID:** 223697

UniProt ID: [Q8BJS4](#)

Cytogenetics: 15 E1

MW: 81.8 kDa

**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]