

Product datasheet for **MR231010**

Sun2 (NM_001205345) Mouse Tagged ORF Clone

Product data:

| | |
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| Product Type: | Expression Plasmids |
| Product Name: | Sun2 (NM_001205345) 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 |



[View online »](#)

ORF Nucleotide
Sequence:

>MR231010 representing NM_001205345
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGTCGAGACGAAGCCAGCGCCTACTCGCTACTCTCAGGATGATAACGATGGCGGCAGCAGCAGCAGTG
GTGCGAGCTCCGTGGCAGGAAGCCAGGGCACCGTGTAAAGACAGTCCCTCTCAGGACTTTGAAGAGGAA
ATCCAGCAACATGAAGCACCTGTCCCCAGCTCCACAGCTGGGCCCTCCTCTGACTCCCACACCTCTAC
TACAGCGAGTCTGTGGTTCGAGAGTCTACATCGGCAGCCCCGGGCTGTGTCCCTCGCCAGGAGTGCCC
TCCTGGATGACCACCTACACAGTGAAGCCACTGGAGCGGGACCTTCGGGGGAGGAGGAGAGGAAC
AGGTGGTCTGAGAGCAGCAAGGCCAATGGGCTCACCGCGGAGCAAGGCCTCAGAAGACTTTTCGGA
TCTTCTCAGGCTATTCTCAGAGGATGACCTTGCAAGGCTACACGGACTCAGACCAGCACAGCTCGGGT
CCAGGTTAAGGAGTGCAGCATCTCGGGCCGGCTCTTTGTCTGGACTCTGGTCACTTTCCAGGCCCGCT
CTTTGGTCTTCTACTGGTGGATTGGCACCACTGGTACCGCTGACAAGTCTGCTCCCTCCCTGGAT
GTCTTCGTCCTAACCAAGTCCAGGCACTTCTCGCTGAACCTGAAGAGTTTCTGTGGTCCCTTCTGCTCT
TGCTACTCCTGACTGGTCTGACCTACGGTGTGGCATTTCACCCCTTAGGGCTGCAGACATTGAACCC
CGCTGTGGTCTCCTGGTGGGCGAGCAAAAGAGAGCAGGAAGCAGCCAGAGGTGTGGGAATCCAGAGACGCC
TCCCAGCACTCCAGGCTGAGCAGCGCTTCTCTCCCGGTTCACTCTCTGGAGCGGCTGTGGAAGCCC
TTGCTGCAGACTTTTCTCCAAGTGGCAGAAAGGAGCCATACGGCTGGAACGCCTGGAGTGCAGGAGGG
GGCTGTGGCCATGGAGGAGGAGTACCTGAGCCATGAAGTGCCTGTCTCTCTAGAAGGTTGGTG
AGCCCGCGAGGCTACCTGAAGGAGGACTTGCAGGGACACAGTGGCTCATATCCAGGAAGAATTGG
CTACCCGTAGGGCAGAGCATACCAAGACTCGGAAGATCTTTCAAGAAGATCGTCCAGGCCCTCAGGA
GTCCGAAGCCCGAGTCCAGCAGCTGAAGACAGAATGAAAAGCATGACCCAGGAGCCTCCAGGAGAGC
TCTGTGAAGGAGCTGGGACGGCTGGAAGCCAGCTGGCCAGCCTGCGGCAGGAGCTGGCTGCCCTGACTC
TGAAGCAGAACTCGGTGGCAGATGAAGTGGCCTGCTGCCACAGAAGATCCAGGCTGCCAGGGCTGATGT
GGAATCCAGTTCCTGACTGGATCAGGCAGTTCCTTCTGGAGACAGGGGTGCGCGCAGCGGGCTCCTG
CAGAGAGATGAGATGCACGCTCAGCTGCAGGAGCTGGAGAACAAGATCCTTACCAAGATGGCTGAGATGC
AGGGCAAGTCAGCCAGGGAGGCCGAGCGTCCCTGGGACAGATACTGCAGAAAGAAGGCATAGTTGGGGT
GACAGAGGAGCAGGTGCACCGGATCGTCAAGCAGGCCCTGCAGCGCTACAGTGAAGCAGGATTGGAATG
GTGGATTACGCCCTGGAATCAGGAGGAGCCAGTGTATCAGCACCCTGCTCTGAGACTTATGAGACCA
AGACGGCACTCCTCAGCCTCTTTGGCATCCCCCTGTGGTACCCTCCAGTCACTCGGGTCACTTCTGCA
GCCAGATGTGACCCAGGCAACTGCTGGCCCTCCAGGGGCCAGGGCTTTGCAGTGGTCCGCCTCTCT
GCTCGAATCCGACCTACAGCCGTTACCTTAGAGCACGTGCCCAAGGCCTGTACCCAACAGCACTATCT
CCAGTGTCCCAAGGACTTCGCCATCTTTGGTTCGATGAAGACCTGCAGCAGGAAGGGACACTTCTGG
CACGTTTGCTACGACCAGGATGGGAGCCATCCAGACCTTCTATTTCCAGGCCCTAAGATGGCCACA
TACCAAGTTGTGGAGCTTCGGATCCTGACCAACTGGGGCCACCCTGAGTACACGTGTATCTACCGCTTCC
GGGTGCACGGAGAGCCTGCCAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR231010 representing NM_001205345
 Red=Cloning site Green=Tags(s)

MSRRSQRLTRYSDNDGGSSSSGASSVAGSQGTVFKDSPLRTLKRKSSNMKHLSPAPQLGPSSDSHTSY
 YSESVVRESYIGSPRAVSLARSALLDDHLHSEPYWSGDLRGRRRRGTGGSESSKANGLTAEKASEDFG
 SSSGYSSSEDDLGYTDSQHSRSLRASAASRAGSFVWTLVTFPGRLFGLLYWWIGTTWYRLTTAASLLD
 VFVLTRSRHFLNLKSLFWFLLLLLLLTGLTYGAWHFYPLGLQTLQPAVVSWWAAKESRKQPEVWESRDA
 SQHFQAEQRVLSRVHSLERRLEALAADFSSNWQKEAIRLERLELRQGAAGHGGSSLSHEDALSLEGLV
 SRREATLKEDLRDRTVAHIQEELATLRAEHHQDSEDLFKKIVQASQSEARVQQLKTEWKSMTQEAFAQES
 SVKELGRLEAQLASLRQELAALTLKQNSVADEVGLLPQKIQAARADVESQFPDWIRQFLLGDRGARSGLL
 QRDEMHAQLQELNKILTKMAEMQGSAREAAAASLGQILQKEGIVGVTEEQVHRIVKQALQRYSEDRIGM
 VDYALESGGASVISTRSETYETKTALLSLFGIPLWYHSQSPRVILQPDVHPGNCWAFQGPQGFVAVRLS
 ARIRPTAVTLEHVPKALSPNSTISSAPKDFAIFGFDEDLQEGTLLGTFAYDQDGEPIQTFYFQASKMAT
 YQVVELRILTNWGHPEYTCIYFRVHGEPAH

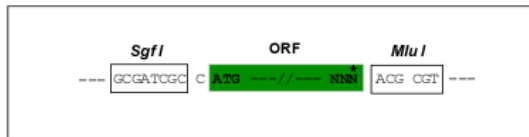
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

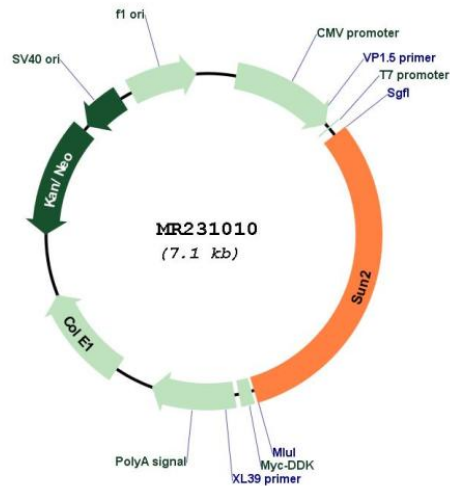
Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM_001205345

ORF Size: 2193 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_001205345.1](#), [NP_001192274.1](#)

RefSeq Size: 3809 bp

RefSeq ORF: 2196 bp

Locus ID: 223697

UniProt ID: [Q8BJS4](#)

Cytogenetics: 15 E1

MW: 82.1 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]