

Product datasheet for **MR231308**

Sun1 (NM_001256115) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Sun1 (NM_001256115) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Sun1
Synonyms:	4632417G13Rik; 5730434D03Rik; mKIAA0810; Unc84a
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**ORF Nucleotide
Sequence:**

>MR231308 representing NM_001256115
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGACTTTTCTCGGCTGCACACGTACACCCACCCAGTGTGTGCCGGAGAACACTGGCTACACTTACG
 CACTCAGTTCTAGTTACTCGTCGGATGCTCTGGATTTTGAAGTACTGAGCACAAGTTGGAACCTGTATTGA
 CTCTCCAAGGATGTCGCCCGCAGCTTTCGCTGCTGGTACACAACAGCTTCGTACAGCAGTGGGGACAGCCAG
 GCTATTGATTCGCACATTAGCACAGCAGGGCCACCCCGCCAAGGGGAGAGAAAACAGGACAGTCAAAC
 AGAGAAGAAGTGAAGCAAGCCAGCTTTTAGTATCAACCACCTGTGAGGGAAGGGCTTGTCTCGAGCAC
 AAGCCATGACAGCTCTTGCAGCCTGCGGAGTGCCACGGTGTGCGGCACCTGTGCTAGATGAGTCCCTG
 ATTCGTGAGCAGACCAAAGTGGACCCTTCTGGGGTCTCGATGATGATGGTGACCTTAAAGTGGAAATA
 AAGCTGCCACTCAGGAAATGGTGAAGTGGCAGCAGAGGTGGCGAGCAGCAATGGATACACTTCCCGTGA
 CTGCAGGATGCTCTCAGCGCAGTGCAGCCTCACAGCCACTCTGCCATCCACGGGACCACCTCCAGG
 GTGTAATCCAGAGACAGGACTCTCAAACCACGCGGAGTGTCTTTTACCTGGATAGGACTCTGTGGCTGG
 CCAAGTCCACCTCCTCATCTTTGCATCATTTATAGTTCAACTTTTCCAAGTGGTTTTAATGAAGCTCAA
 TTTTGAAGTACAAATTGAAAGGCTATGAATCCAGAGCTTATGAATCACAGAGCTATGAGACAAAGAGC
 CATGAGTCAGAAGCCATCTCGTCACTGTGGGAGGATGACTGCCGGAGAAGTTTCCAGAGTGGACGGGG
 AGTCCCTGTGTGACCTCTTGGTTCAAGCACTGCGAAGGACTAGAGCTGCCGGGTGGTCTGTGGCCGAGGC
 CGTGTGGTGGTGTCTGGCTGGCTGTCTGTCCAGGGAAGGCAGCCTCGGGAACCTTCTGGTGGCTA
 GGGAGCGGCTGGTACCAATTTGTACTTTGATTTCTGGCTGAATGTCTTTCTTACCAGTGCCTCCCTC
 GAAATATTTGCAAGGTTTTGTCTTCTCCTCCACTCTACTTTTACTAGGTGCTGGTGTCTCCCTG
 GGGCCAGGAAACTTCTTCTCACTCTACCAGTGTGAAGTGGACGGCCATGCAGCCAACACAGAGGGTG
 GACGATCCAAGGCATGCATAGACCTGGCCCTTCCCCGAGCCACCTCAAAGGTTGATCACAAGG
 CTTCCAGTGGCCTCAGGAGAGTGACATGGGGCAGAAGGTAGCTTCTTTGAGTGCAGTGCACACAACCA
 TGATGAGAGACTGCAGAGCTGACAGTCTGCTTCAAGAACTACAGATACGGGTAGACCAAGTGGATGAC
 GGCAGGGAAGGGTGTCACTGTGGTCAAGAATGTGGTTGGACAGCACCTGCAGGAGATGGGCACCATAG
 AACCCATGATGTAAGACTGACTTCATGACTTCCACCATGACCATGAAGTGCCTCTCCAAGTGGAA
 AGATGTTCTTAGAAAAGTACAGAAAAAATCTGAGGCTATCCAGAAGGAGCTGGAAGAAAACCAAGCTGAAA
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 TGAAGTACAGCTGTGAGACTGGCAGCATCTGAAGACCAGCTGTGAGCAGGCTGGGGCCCGCATCCAGGA
 GACTGTGCAGCTCATGTTCTCTGAGGATCAGCAGGGCGGTTCCCTCGAGTGGCTATTAGAGAAGCTTCT
 TCTCGGTTCTGAGCAAGGATGAGTGCAGGTGCTTACATGACCTTGAAGTGAAGTGAAGTGAAGTGAAGT
 TCACACACCACATCACCGTGCAGGACAGGCCCGACATCCGAGGCTATTGTGTCTGCCGTGAATCAGGC
 AGGGATTCAGGAATCACAGAAGCGCAAGCACATATCATTGTGAACAATGCTCTGAAGCTGACTCCCAA
 GACAAGACGGGGATGGTGGACTTTGCTCTGGAGTCTGGAGGTGGCAGCATCCTAAGCACTCGGTGCTCTG
 AGACCTATGAGACCAAGACGGCACTGCTGAGCCTGTTGGGGTCCCACTGTGGTACTTCTCACAGTCAAC
 TCGAGTGGTGTCCAGCCCGACATCTACCAGGGAATTGCTGGGGTCAAAGGTTCCAGGGGTACCTG
 GTGGTGGGTTGTCCATGAAGATCTACCAACCACATTACCATGGAACACATTCAAAGCACTATCAC
 CCACTGGTAACATCTCCAGTGCACCCAAAGACTTTGCAGTCTATGGACTGAAACGGAGTATCAAGAAGA
 GGGGCAGCCTCTGGGACGGTTCACCTATGACCAGGAAGGAGACTCACTCCAGATGTTCCACACACTGGAA
 AGACCTGACCAAGCCTTCCAGATAGTAGAGCTCCGGGCTCTGTTCAACTGGGGCCACCCTGAGTACACTT
 GCCTTACCGGTTCCGAGTCCACGGAGAGCCATCCAG

ACGCGTACGCGGCCGCTCGAGCAGAAAAGTCACTCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR231308 representing NM_001256115
 Red=Cloning site Green=Tags(s)

MDFSRLHTYTPPQCVPE NTGYTYALSSSYSSDALDFE TEHKLEPVFDS PRMSRRSLRLVTTASYS SSGDSQ
 AIDSHISTS RATPAKGRETRTVKQRRSASKPAFSINHL SGKGLSSSTSHDSSCSLRSATVLRHPVLDES L
 IREQTKVDHF WGLDDDDGLKGGNKAATQNGELAAEVASSNGYTCRDCRML SARTDALTAHSAIHGTTSR
 VYSRDRTLKPRGVSFYLDRTLWLAKSTSSSFASFIVQLFQVVLMLKNFETYKLGKGYESRAYESQSYETKS
 HESEAHLGHCGRMTAGELSRVDGESLCDLLVQALRRRTRAAAGWSVAEAVWSVLWLVAVSAPGKAASGTFWWL
 GSGWYQFVTLISWLVNLFLLTRCLRNICVFVLLPLLLLLL GAGVSLWGQGNFFSLLPVLNWTAMQPTQRV
 DDSKGMHRPGPLPPSPPKVDHKASQWPQESDMGQKVASLSAQCHNHERLAELTVLLQKLQIRVDQVDD
 GREGLSLWVKNVVGQHLQEMGTIEPPDAKTFDMTFHHDHEVRLSNLEDVLRKLTEKSEAIQKELEETKLLK
 AGSRDEEQPLLD RVQHLELELNLKSQLSDWQHLKTSCEQAGARIQETVQLMFSEDQGGGSEWLLEKLS
 SRFVSKDELQVLLHDLELKLQNI THHITVTGQAPTSEAI VSAVNQAGISGITEAQAHII VNNALKLYSQ
 DKTGMVDFALESGGGSILSTRCSEYETKTALLSLFGVPLWYFSQSPRVVIQPD IYPGNCWAFKGSQGYL
 VVRLSMKIYPTTFMEHI PKTLSPTGNISSAPKDFAVYGLETEYQE EGQPLGRFTYDQEGDSLQMFHTLE
 RPDQAFQIVELRVL SNWGHPEYTCLYRFRVHGEPIQ

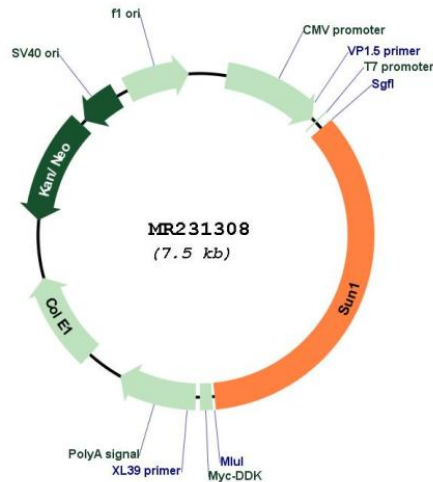
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:


ACCN: NM_001256115

ORF Size: 2628 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_001256115.1](#), [NP_001243044.1](#)

RefSeq Size: 4022 bp

RefSeq ORF: 2631 bp

Locus ID: 77053

UniProt ID: [Q9D666](#)

Cytogenetics: 5 G2

MW: 98.4 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 (PubMed:20711465, PubMed:16380439, PubMed:24062341, PubMed:25892231, PubMed:26842404). 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 (PubMed:19874786). 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 (PubMed:19874786). Involved in telomere attachment to nuclear envelope in the prophase of meiosis implicating a SUN1/2:KASH5 LINC complex in which SUN1 and SUN2 seem to act at least partial redundantly (PubMed:17543860, PubMed:19211677, PubMed:19509342, PubMed:24062341, PubMed:25892231, PubMed:26842404). Required for gametogenesis and involved in selective gene expression of coding and non-coding RNAs needed for gametogenesis (PubMed:17543860). Helps to define the distribution of nuclear pore complexes (NPCs) (PubMed:17724119). Required for efficient localization of SYNE4 in the nuclear envelope (PubMed:23348741). May be involved in nuclear remodeling during sperm head formation in spermatogenesis (PubMed:20711465). May play a role in DNA repair by suppressing non-homologous end joining repair to facilitate the repair of DNA cross-links (By similarity). [UniProtKB/Swiss-Prot Function]