

## Product datasheet for **MR231254**

### Sun1 (NM\_001256116) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Sun1 (NM_001256116) 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:

>MR231254 representing NM\_001256116  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCGCGATCGCC

ATGGACTTTTCTCGGCTGCACACGTACACCCACCCAGTGTGTGCCGAGAACACTGGCTACACTTACG  
CACTCAGTTCTAGTTACTCGTCGGATGCTCTGGATTTTGAACACTGAGCACAAAGTTGGAACCTGTATTGA  
CTCTCCAAGGATGTCGCCCGCAGCTTTCGCTGTCGTCACAAACAGCTTCGTACAGCAGTGGGGACAGCCAG  
GCTATTGATTCGCACATTAGCACAGCAGGGCCACCCCGCCAAGGGGAGAGAAACCAGGACAGTCAAAC  
AGAGAAGAAGTGAAGCAAGCCAGCTTTTAGTATCAACCACCTGTGAGGAAAGGGCTTGTCTCGAGCAC  
AAGCCATGACAGCTCTTGCAGCCTGCGGAGTGCCACGGTGTGCGGCACCTGTGCTAGATGAGTCCCTG  
ATTCGTGAGCAGACCAAAGTGGACCCTTCTGGGGTCTCGATGATGATGGTGACCTTAAAGGTGAAATA  
AAGCTGCCACTCAGGAAATGGTGAAGTGCAGCAGAGGTGGCGAGCAGCAATGGATACACTTGGCGTGA  
CTGCAGGATGCTCTCAGCGCAGTGCAGCACTCACAGCCACTTGGCCATCCACGGGACCACCTCCAGG  
GTGTAAGTCCAGAGACAGGACTCTCAAACACCCCATCTCGGTCACTGTGGGAGGATGACTGCCGGAGAAC  
TTTCCAGAGTGGACGGGGAGTCCCTGTGCGATGACTGTAAAGGGGAAGAAGCACCTTGAGATACACACAGC  
CACCCACTCGCAACTGCCCCAGCCACACAGGGTGGCCGGGGCCATGGGGCGCCTCTGCATCTATACAGGT  
GACCTCTTGGTTCAAGCACTGCGAAGGACTAGAGCTGCCGGTGGTCTGTGGCCGAGGCCGTGTGGTTCGG  
TGCTCTGGCTGGCTGTCTCTGCTCCAGGGAAGGCAGCCTCGGGAACCTTCTGGTGGCTAGGGAGCGGCTG  
GTACCAATTTGTACTTTGATTTCTTGGCTGAATGTCTTTCTTACCAGGTGCCTTCGAAATATTTGC  
AAGGTTTTTGTCTTCTCCACTCTACTTTTACTAGGTGCTGGTGTCTCCCTGTGGGGCCAGGGAA  
GGGCATGCATAGACCTGGCCCTTCCCCGAGCCACCTCAAAGGTTGATCACAAGGCTTCCCAGTGG  
CCTCAGGAGAGTGACATGGGGCAGAAGGTAGCTTCTTGTAGTGCCGAGTGCACAAACCATGATGAGAGAC  
TTGCAGAGCTGACAGTCTGCTTCAAGAACTACAGATACGGGTAGACCAAGTGGATGACGGCAGGGAAGG  
GCTGTCACTGTGGGTCAAGAATGTGGTTGGACAGCACCTGCAGGAGATGGGCACCATAGAACCACCTGAT  
GCTAAGACTGACTTCATGACTTTCCACCATGACCATGAAGTGCCTCTCCAAGTGAAGATGTTCTTA  
GAAAAGTACAGAAAACTGAGGCTATCCAGAAGGAGCTGGAAGAAACCAAGCTGAAAGCAGGCAGCAG  
GGATGAAGAGCAGCCCTCCTTGACCGTGTGCAGCACCTAGAAGTGAAGTGAACCTGTTGAAGTACAG  
CTGTCAAGTGCAGCATCTGAAGACCAGCTGTGAGCAGGCTGGGGCCCGCATCCAGGAGACTGTGCAGC  
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GAATCACAGAAGCGCAAGCACATATCATTGTGAACAATGCTCTGAAGCTGTACTCCCAAGACAAGACGGG  
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ACCAAGACGGCACTGTGAGCCTGTTGGGGTCCCAGTGGTACTTCTCACAGTCACTCGAGTGGTGA  
TCCAGCCCGACATCTACCCAGGGAATTGCTGGGCGTTCAAAGGTTCCCAGGGTACCTGGTGGTGGGTT  
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ATCTCCAGTGCCCCAAAGACTTTGCAGTCTATGGACTGGAACCGAGATCAAGAAGAGGGGCAGCCTC  
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TTCCGAGTCCACGGAGAGCCATCCAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR231254 representing NM\_001256116  
Red=Cloning site Green=Tags(s)

MDFSRLHTYTPPQCVPENTGYTYALSSSYSSDALDFETEHKLEPVFDSRMSRRSLRLVTTASYSSGDSQ  
AIDSHISTSRATPAKGRETRTVKQRRSASKPAFSINHL SGKGLSSSTSHDSSCLRSATVLRHPVLDESL  
IREQTKVDHFWGLDDGDLKGGNKAATQNGELAAEVASSNGYTCRDCRML SARTDALTAHSAIHGTTSR  
VYSRDRTLKPPHLGHCGRMTAGELSRVDGESL CDDCKGKKHLEIHTATHSQLPQPHRVAGAMGRLCIYTG  
DLLVQALRRTRAAGWSVAEAVWSVLWLA VSAPGKAASGTFWWLGSGWYQFVTLISWLVNLFLLTRCLRNIC  
KVFVLLLLPLLLLLGAGVSLWGQGNFFSLLPVLNWTAMQPTQRVDDSKGMHRPGPLPPSPPKVDHKASQW  
PQESDMGQKVASLSAQCHNHERLAELTVLLQKLQIRVDQVDDGREGLSLWVKNVVGQHLQEMGTIEPPD  
AKTDFMTFHHHDEVRLSNLEDVLRKLTEKSEAIQKELEETKLKAGSRDEEQPLLDREVQHLELELNLKKSQ  
LSDWQHLKTSCEQAGARIQETVQLMFSEDQGGSEWLLEKLSRFVSKDELQVLLHDLELKLQNITHH  
ITVTGQAPTSEAI VSAVNQAGISGITEAQAHII VNNALKLYSQDKTGMVDFALESGGGSILSTRCSETYE  
TKTALLSLFGVPLWYFSQSPRVVIQPD IYPGNCWAFKGSQGYL VVRLSMKIYPTTFMEHIPKTL SPTGN  
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FRVHGPEIQ

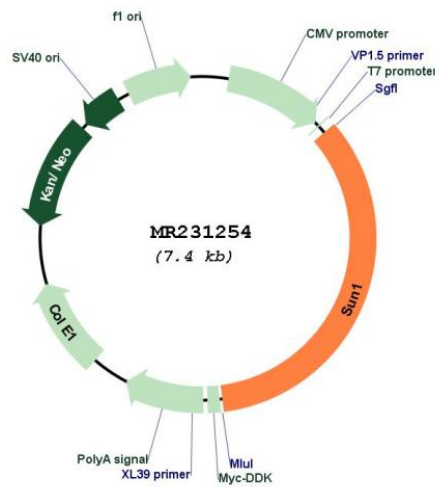
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites: Sgfl-MluI

Cloning Scheme:



Plasmid Map:



<b>ACCN:</b>	NM_001256116
<b>ORF Size:</b>	2547 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_001256116.2</a>
<b>RefSeq Size:</b>	3878 bp
<b>RefSeq ORF:</b>	2550 bp
<b>Locus ID:</b>	77053
<b>UniProt ID:</b>	<a href="#">Q9D666</a>
<b>Cytogenetics:</b>	5 G2
<b>MW:</b>	95 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]