

Product datasheet for **MC229043**

Sun1 (NM_001256116) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Sun1 (NM_001256116) Mouse Untagged Clone
Tag:	Tag Free
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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Fully Sequenced ORF: >MC229043 representing NM_001256116
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGACTTTTCTCGGCTGCACACGTACACCCACCCAGTGTGTGCCGGAGAACACTGGCTACACTTACG
 CACTCAGTTCTAGTTACTCGTCGGATGCTCTGGATTTTGAACACTGAGCACAAAGTTGGAACCTGTATTGA
 CTCTCCAAGGATGTCGCCCGCAGCTTTCGCTGCTGGTACAAACAGCTTCGTACAGCAGTGGGGACAGCCAG
 GCTATTGATTGCGACATTAGCACAGCAGGGCCACCCCGCCAAGGGGAGAGAAACCAGGACAGTCAAAC
 AGAGAAGAAGTGAAGCAAGCCAGCTTTTAGTATCAACCACCTGTGAGGAAAGGGCTTGTCTCGAGCAC
 AAGCCATGACAGCTCTTGCAGCCTGCGGAGTGCCACGGTGTGCGGCACCTGTGCTAGATGAGTCCCTG
 ATTCGTGAGCAGACCAAAGTGGACCCTTCTGGGGTCTCGATGATGATGGTGACCTTAAAGGTGAAATA
 AAGCTGCCACTCAGGAAATGGTAACTGGCAGCAGAGGTGGCGAGCAGCAATGGATACACTTGCCGTGA
 CTGCAGGATGCTCTCAGCGCAGTGTGACGCACTCACAGCCACTCTGCCATCCACGGGACCACCTCCAGG
 GTGTACTCCAGAGACAGGACTCTCAAACCACCCATCTCGGTCACTGTGGGAGGATGACTGCCGGAGAAC
 TTTCCAGAGTGGACGGGGAGTCCCTGTGCGATGACTGTAAAGGGGAAGAAGCACCTTGAGATACACACAGC
 CACCCACTCGCAACTGCCCCAGCCACACAGGGTGGCCGGGGCCATGGGGCGCCTCTGCATCTATACAGGT
 GACCTCTTGGTTCAAGCACTGCGAAGGACTAGAGCTGCCGGGTGGTCTGTGGCCGAGGCCGTGTGGTTCGG
 TGCTCTGGCTGGCTGTCTGTCTCCAGGGAAGGCAGCCTCGGGAACCTTCTGGTGGCTAGGGAGCGGCTG
 GTACCAATTTGTACTTTGATTTCTTGGCTGAATGTCTTTCTTACCAGGTGCCTTCGAAATATTTGC
 AAGGTTTTTGTCTTCTCCACTCTACTTTTACTAGGTGCTGGTGTCTCCCTGTGGGCCAGGGAA
 GGGCATGCATAGACCTGGCCCTTCCCCGAGCCACCTCAAAGGTTGATCACAAAGGCTTCCCAGTGG
 CCTCAGGAGAGTGACATGGGGCAGAAGGTAGCTTCTTGTAGTGCCGAGTGCCACAACCATGATGAGAGAC
 TTGCAGAGCTGACAGTCTGCTTCAAGAACTACAGATACGGGTAGACCAAGTGGATGACGGCAGGGAAGG
 GCTGTCACTGTGGGTCAAGAATGTGGTTGGACAGCACCTGCAGGAGATGGGCACCATAGAACCACCTGAT
 GCTAAGACTGACTTCATGACTTTCCACCATGACCATGAAGTGCCTCTCCAACCTGGAAGATGTTCTTA
 GAAAACACTGACAGAAAACTGAGGCTATCCAGAAGGAGCTGGAAGAAACCAAGCTGAAAGCAGGCAGCAG
 GGATGAAGAGCAGCCCTCCTTGACCGTGTGCAGCACCTAGAAGTGAAGTGAACCTGTTGAAGTACAG
 CTGTCACTGACAGCATCTGAAGACCAGCTGTGAGCAGGCTGGGGCCCGCATCCAGGAGACTGTGCAGC
 TCATGTTCTCTGAGGATCAGCAGGGCGGTTCCCTCGAGTGGCTATTAGAGAAGCTTCTTCTCGGTTCTGT
 GAGCAAGGATGAGCTGCAGGTGCTTACATGACCTTGAGCTGAAACTGTGCAGAATATCACACACCAC
 ATCACCGTGACAGGACAGGCCCGACATCCGAGGCTATTGTGTCTGCCGTGAATCAGGCAGGGATTTTCAG
 GAATCACAGAAGCGCAAGCACATATCATTGTGAACAATGCTCTGAAGCTGTACTCCCAAGACAAGACGGG
 GATGGTGGACTTTGCTCTGGAGTCTGGAGGTGGCAGCATCCTAAGCACTCGGTGCTCTGAGACCTATGAG
 ACCAAGACGGCACTGTGAGCCTGTTGGGGTCCCAGTGTGGTACTTCTCACAGTCACTCGAGTGGTGA
 TCCAGCCCGACATCTACCCAGGGAATTGCTGGGCGTTCAAAGGTTCCCAGGGTACCTGGTGGTGGGTT
 GTCCATGAAGATCTACCAACCACATTCACCATGGAACACATTCAAAGACACTATCACCCACTGGTAAC
 ATCTCCAGTGCCCCAAAGACTTTGCAGTCTATGGACTGGAACCGAGATCAAGAAGAGGGGCAGCCTC
 TGGGACGGTTCACCTATGACCAGGAAGGAGACTCACTCCAGATGTTCCACACACTGGAAAGACCTGACCA
 AGCCTTCCAGATAGTAGACTCCGGTCTGTCCAACCTGGGGCCACCCTGAGTACACTTGCCTCTACCGG
 TTCCGAGTCCACGGAGAGCCCATCCAGTAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
 ACCN: NM_001256116
 Insert Size: 2550 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).
OTI Annotation:	Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
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:	<ol style="list-style-type: none">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:	<u>NM_001256116.1</u> , <u>NP_001243045.1</u>
RefSeq Size:	3878 bp
RefSeq ORF:	2550 bp
Locus ID:	77053
UniProt ID:	<u>Q9D666</u>
Cytogenetics:	5 G2

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]

Transcript Variant: This variant (3) lacks an in-frame exon in the coding region, compared to variant 1. The resulting 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.