

Product datasheet for **MC222597**

Sun1 (NM_024451) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Sun1 (NM_024451) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Sun1
Synonyms:	4632417G13Rik; 5730434D03Rik; mKIAA0810; Unc84a
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF:

>MC222597 representing NM_024451
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGACTTTTCTCGGCTGCACACGTACACCCACCCAGTGTGTGCCGGAGAACACTGGCTACACTTACG
 CACTCAGTTCTAGTTACTCGTCGGATGCTCTGGATTTTGAAACTGAGCACAAGTTGGAACCTGTATTGGA
 CTCTCCAAGGATGTCGCCCGCAGCTTTCGCTGCTGGTACAAACAGCTTCGTACAGCAGTGGGGACAGCCAG
 GCTATTGATTTCGCACATTAGCACAGCAGGGCCACCCCGCCAAGGGGAGAGAAAACAGGACAGTCAAAC
 AGAGAAGAAGTGAAGCAAGCCAGCTTTTAGTATCAACCACCTGTGAGGGAAGGGCTTGTCTCGAGCAC
 AAGCCATGACAGCTCTTGCAGCCTGCGGAGTGCCACGGTGTGCGGCACCTGTGCTAGATGAGTCCCTG
 ATTCGTGAGCAGACCAAAGTGGACCCTTCTGGGGTCTCGATGATGATGGTGACCTTAAAGTGGAAATA
 AAGCTGCCACTCAGGGAATGGTGAAGTGGCAGCAGAGGTGGCGAGCAGCAATGGATACACTTCCCGTGA
 CTGCAGGATGCTCTCAGCGCAGTACGCACTCACAGCCACTCTGCCATCCACGGGACCACCTCCAGG
 GTGTAACCCAGAGACAGGACTCTCAAACCACGCGGAGTGTCTTTTACCTGGATAGGACTCTGTGGCTGG
 CCAAGTCCACCTCCTCATCTTTGCATCATTTATAGTTCAACTTTTCCAAGTGGTTTTAATGAAGCTCAA
 TTTTGAACCTTACAAATTGAAAGGCTATGAATCCAGAGCTTATGAATCACAGAGCTATGAGACAAAGAGC
 CATGAGTCAGAAGCCATCTCGGTCACTGTGGGAGGATGACTGCCGGAGAAGTTTCCAGAGTGGACGGGG
 AGTCCCTGTGCGATGACTGTAAGGGGAAGAAGCACCTTGAGATACACACAGCCACCCACTCGCAACTGCC
 CCAGCCACACAGGGTGGCCGGGGCCATGGGGCGCCTCTGCATCTATACAGGTGACCTCTTGGTTCAAGCA
 CTGCGAAGGACTAGAGCTGCCGGTGGTCTGTGGCCGAGGCCGTGGTGGTGGTCTGGCTGGCTGTCT
 CTGCTCCAGGGAAGGCAGCCTCGGGAACCTTCTGGTGGCTAGGGAGCGGCTGGTACCAATTTGTTACTTT
 GATTTCTGGCTGAATGTCTTTCTTACCAGGTGCCTTCGAAATATTTGCAAGGTTTTTGTCTTGCTC
 TCCCCACTCCTACTTTTACTAGGTGCTGGTGTCTCCCTGTGGGGCCAGGAAACTTCTTCTCACTCCTAC
 CAGTGTGAACTGGACGGCCATGCAGCCAAACAGAGGGTGGACGATTCCAAGGGCATGCATAGACCTGG
 CCCTCTTCCCCGAGCCACCTCCAAAGGTTGATCACAAGGCTTCCCAGTGGCCTCAGGAGAGTGACATG
 GGGCAGAAGGTAGCTTCTTTGAGTGCAGTGGCACAACCATGATGAGAGACTTGCAGAGCTGACAGTCC
 TGCTTCAAGAACTACAGATACGGGTAGACCAAGTGGATGACGGCAGGGAAGGGTGTCACTGTGGGTCAA
 GAATGTGGTTGGACAGCACCTGCAGGAGATGGGCACCATAGAACCACCTGATGCTAAGACTGACTTCATG
 ACTTTCCACCATGACCATGAAGTGGTCTCTCCAAGTGAAGATGTTCTTAGAAAAGTACAGAAAAAT
 CTGAGGCTATCCAGAAGGAGCTGGAAGAAACCAAGCTGAAAGCAGGCAGCAGGGATGAAGAGCAGCCCT
 CCTTGACCGTGTGCAGCACCTAGAAGTGAAGTGAACCTGTTGAAGTCAAGCTGTGAGACTGGCAGCAT
 CTGAAGACCAGCTGTGAGCAGGCTGGGGCCCGCATCCAGGAGACTGTGACGCTCATGTTCTCTGAGGATC
 AGCAGGGCGGTTCCCTCGAGTGGCTATTAGAGAAGCTTTCTTCTCGGTTTCGTGAGCAAGGATGAGCTGCA
 GGTGCTTTACATGACCTTGAAGTGAAGTGTGCGGTAATCAGGCAGGGATTTCCAGGAATCACAGAAGCGCAAG
 GCCCGACATCCGAGGCTATTGTGTCTGCCGTGAATCAGGCAGGGATTTCCAGGAATCACAGAAGCGCAAG
 CACATATCATTGTGAACAATGCTCTGAAGTGTACTCCAAGACAAGACGGGGATGGTGGACTTTGCTCT
 GGAGTCTGGAGGTGGCAGCATCCTAAGCACTCGGTGCTCTGAGACCTATGAGACCAAGACGGCAGCTGTG
 AGCCTGTTTGGGGTCCCCTGTGGTACTTCTCACAGTCACTCGAGTGGTATCCAGCCCGACATCTACC
 CAGGGAATTGCTGGGCGTTCAAAGGTTCCAGGGTACCTGGTGGTGGGTTGTCCATGAAGATCTACCC
 AACACATTACCATGGAACACATTCCAAGACACTATCACCCACTGGTAAACATCTCCAGTCCCCCAAA
 GACTTTGCAGTCTATGGACTGGAACCGAGTATCAAGAAGAGGGGCGCCTCTGGGACGGTTACCTATG
 ACCAGGAAGGAGACTCACTCCAGATGTTCCACACTGGAAGACCTGACCAAGCCTTCCAGATAGTAGA
 GCTCCGGTCTGTCCAAGTGGGGCCACCTGAGTACACTTGCCTTACCAGTCCGAGTCCACGGAGAG
 CCCATCCAGTAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites:

Sgfl-Mlul

ACCN:	NM_024451
Insert Size:	2742 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).
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_024451.2</u> , <u>NP_077771.1</u>
RefSeq Size:	4133 bp
RefSeq ORF:	2742 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 (1) is the longest transcript and encodes the longest isoform (1).