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Product datasheet for MG211159

Sun1 (NM_024451) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Sun1 (NM_024451) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Sun1
Synonyms:	4632417G13Rik; 5730434D03Rik; mKIAA0810; Unc84a
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

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ORF Nucleotide Sequence:

>MG211159 representing NM_024451
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGACTTTTCTCGGCTGCACACGTACACCCCACCCCAGTGTGTGCCGGAGAACACTGGCTACACTTACG
CACTCAGTTCTAGTTACTCGTCGGATGCTCTGGATTTTGAAACTGAGCACAAGTTGGAACCTGTATTTGA
CTCTCCAAGGATGTCCCGCCGCAGCTTGCGTCTGGTCACAACAGCTTCGTACAGCAGTGGGGACAGCCAG
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GCTCCGGGTCCTGTCCAACTGGGGCCACCCTGAGTACACTTGCCTCTACCGGTTCCGAGTCCACGGAGAG
CCCATCCAG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG211159 representing NM_024451
Red=Cloning site Green=Tags(s)

MDFSRLHTYTPPQCVPENTGYTYALSSSYSSDALDFETEHKLEPVFDSPRMSRRSLRLVTTASYSSGDSQ
AIDSHISTSRATPAKGRETRTVKQRRSASKPAFSINHLSGKGLSSSTSHDSSCSLRSATVLRHPVLDESL
IREQTKVDHFWGLDDDGDLKGGNKAATQGNGELAAEVASSNGYTCRDCRMLSARTDALTAHSAIHGTTSR
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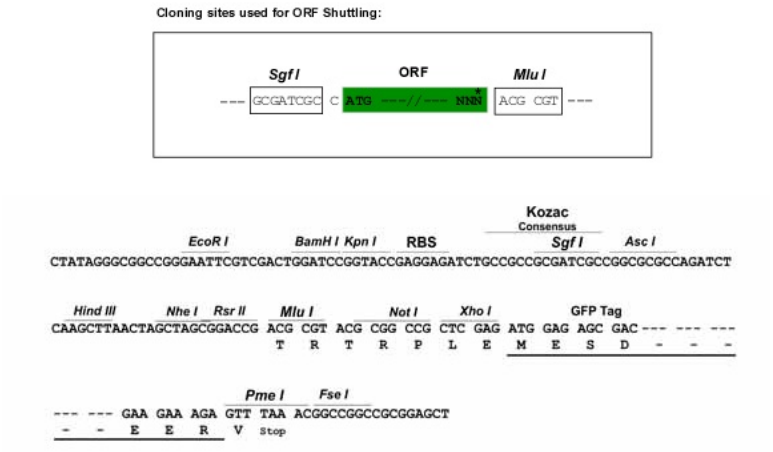
SLFGVPLWYFSQSPRVVIQPDIYPGNCWAFKGSQGYLVVRLSMKIYPTTFTMEHIPKTLSPTGNISSAPK
DFAVYGLETEYQEEGQPLGRFTYDQEGDSLQMFHTLERPDQAFQIVELRVLSNWGHPEYTCLYRFRVHGE
PIQ

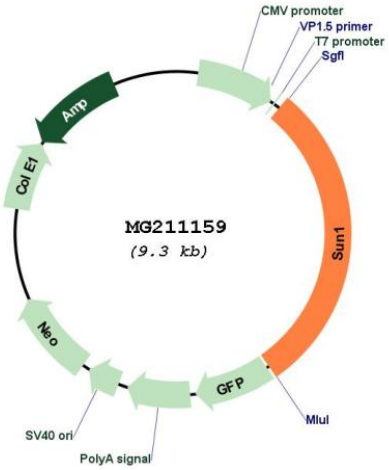
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:	NM_024451
ORF Size:	2739 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_024451.2, NP_077771.1
RefSeq Size:	4133 bp
RefSeq ORF:	2742 bp
Locus ID:	77053
UniProt ID:	Q9D666
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 spermatogenenis (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]