

## Product datasheet for **MG209896**

### Leo1 (NM\_001039522) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Leo1 (NM_001039522) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Leo1
Synonyms:	Gm185
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide  
Sequence:

>MG209896 representing NM\_001039522  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCGCGATCGCC

ATGGCGGACATGGAGACCTCTTCGGGAGCGAAGCTGAGAGCGAGGCCGAGCGCAAAGATTCGAGTCTG  
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GCCTCTCATCACAGTGGCAGTGACAATCACTCTGAACGGTCAGACAATAGGTCGGAGGCTTCGAGCGCT  
CTGACCACGAGGATAATGAGCCCTCTGACGAGGACCAGCACAGTGGCTCTGAAGCCACAACGATGACGA  
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ACGAGGATCGGGAGCAAGGTCGGATGAGGATAAGCTGCAGAATCTGACGACGACGAGGAGAAAATGCA  
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AGAAGTATGTGATCAGTATGAAGAAGAAGAAGATGAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG209896 representing NM\_001039522  
 Red=Cloning site Green=Tags(s)

MADMEDLFGSEAESEAERKDSESESDSDSDQDNGASGSNASGSESDQDDRGDSGQPSNKELFGDDSEEEG  
 ASHHSGSDNHSESDNRSEASERSDHEDNEPSEDEQHSSEAHNDDDEGHRSDGSRHSEAEAGSEKAQS  
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 EDEVLRRLKRKNAIPSDSEADSDTEVPKDNNGTMDLFGGADDISSGSDGEDKPPTPGQPVDENGLPQDQQE  
 EEP I P E T R I E V E I P K V N T D L G N D L Y F V K L P N F L S V E P R P F D P Q Y Y E D F E D E E M L D E E G R T R L K L K V E N T  
 I R W R I R R D E E G N E I K E S N A R I V K W S D G S M S L H L G N E V F D Y K A P L Q G D H N H L F I R Q T G L Q G Q A V F K T K L  
 T F R P H S T D S T H R K M T L S L A D R C S K T Q K I R I L P M A G R D P E C Q R T E M I K K E E E R L R A S I R R E S Q Q R R M R E K  
 Q H Q R G L S A S Y L E P D R Y D E E E E G E E S V S L A A I K N R Y K G G I R E E R A R I Y S S D S D E G S E E D K A Q R L L K A K K L N  
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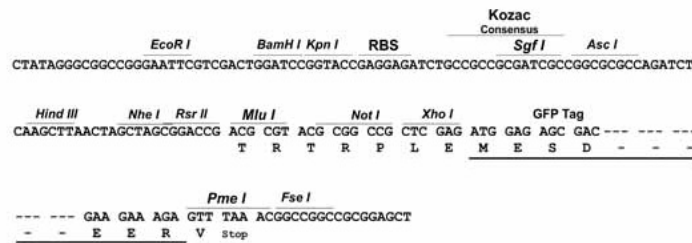
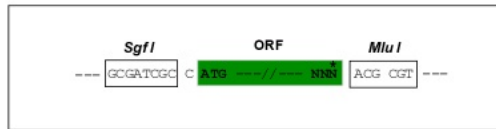
TRTRPLE - GFP Tag - V

Restriction Sites:

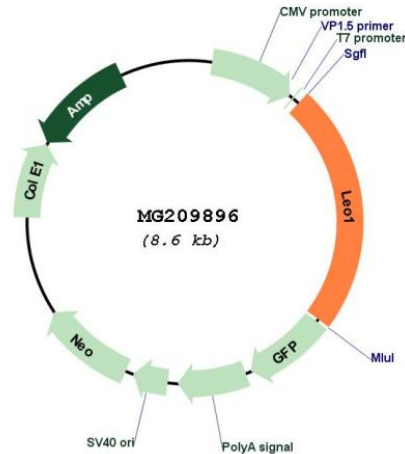
Sgfl-Mlul

Cloning Scheme:

Cloning sites used for ORF Shuttling:



## Plasmid Map:



ACCN: NM\_001039522

ORF Size: 2001 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\\_001039522.1](#), [NP\\_001034611.1](#)

RefSeq Size: 2192 bp  
RefSeq ORF: 2004 bp  
Locus ID: 235497  
UniProt ID: [Q5XJE5](#)  
Cytogenetics: 9 D

**Gene Summary:** Component of the PAF1 complex (PAF1C) which has multiple functions during transcription by RNA polymerase II and is implicated in regulation of development and maintenance of embryonic stem cell pluripotency. PAF1C associates with RNA polymerase II through interaction with POLR2A CTD non-phosphorylated and 'Ser-2'- and 'Ser-5'-phosphorylated forms and is involved in transcriptional elongation, acting both independently and synergistically with TCEA1 and in cooperation with the DSIF complex and HTATSF1. PAF1C is required for transcription of Hox and Wnt target genes. PAF1C is involved in hematopoiesis and stimulates transcriptional activity of KMT2A/MLL1. PAF1C is involved in histone modifications such as ubiquitination of histone H2B and methylation on histone H3 'Lys-4' (H3K4me3). PAF1C recruits the RNF20/40 E3 ubiquitin-protein ligase complex and the E2 enzyme UBE2A or UBE2B to chromatin which mediate monoubiquitination of 'Lys-120' of histone H2B (H2BK120ub1); UB2A/B-mediated H2B ubiquitination is proposed to be coupled to transcription. PAF1C is involved in mRNA 3' end formation probably through association with cleavage and poly(A) factors. Involved in polyadenylation of mRNA precursors. Connects PAF1C to Wnt signaling (By similarity).[UniProtKB/Swiss-Prot Function]