

Product datasheet for **MG207897**

Sesn1 (NM_001013370) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Sesn1 (NM_001013370) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Sesn1
Synonyms:	1110002G11Rik; AU044290; Pa26; Sest1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG207897 representing NM_001013370
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCGCCTGGCCCGCGTGAACGAGGGGTACGCAGCCTCGCTGGCTGTCTCCGAGCTGCTGAGCTGCC
 ACCAGTGCGGCGGGACCGCGCCAGGACGAGGAACCTGGAATCAGAATCCCTCGGCCACTAGGACACGG
 ACCAAGCAGGTTCCATCCAGAGAAGGAGATGCTGCAGGTGGGAGTGAAGACGCACAGATGCATGCGTTA
 TTTGCAGACTCCTTTGCTGCTTTGGGTCGCTGGATAACATCACATTAGTGATGGTTTTCCATCCACAAT
 ATTTAGAAAGTTTCTAAAGACTCAACTACCTACTACAAATGGATGGGCCATTACCCCTCATTATCG
 GCACTACATTGGAATCATGGCGGACGGAGGCATCAGTGTTCCTACCTGGTGAATCTGCATGTCAGTGAC
 TTTCTTATGTTGGTGGGACCCCAAGTGGCTCAATGGTTAGAGAATGCTCCTCAAAAAGTGCAGAACT
 TAGGAGAACTTAACAAAGTGTAGCCATAGGCCCTGGCTGATTACCAAAGAATATCGAGGGCCTTCT
 GAAAGCAGAGGAGCACAGCTGGTCTCTCGCCGAGCTGGTCCATGCCGTGGTTCTGCTCACACACTACCAC
 TCTCTTGCTCCTTACATTTGGCTGTGAATTAGTCCAGAGATTCAATGCGATGGTGGCCACACCTTCA
 GACCGCCTTCTGTTAGTAAGTACTGTCATCTGTGACATTACAAATGGCAATCACAGTGTGGATGAGATGCA
 AGTCAACTCAGCAGGAAATGCTTCGGTAAGTGATTCTTCTTTGAGGTGGAAGCTCTCATGGAAAAGATG
 AGGCAGTTACAGGAATGCCGAGAGGAGGAGGAGGCTAGCCAGGAGGAGATGGCGTCGCGGTTTGAGATGG
 AAAAGAGAGAGAGCATGTTTGTCTTCTTTCGGACGATGATGAAGTTACACCAGCAAGAGATGTGTCTCG
 GCCTTTGAGGACACTAGTTACGGCTACAAGGATTTCTCCAGACACGGGATGCATGTCCCAACGTTTCGT
 GTCCAGGACTACTGCTGGGAAGACCATGGTTACTCTCTGGTGAATCGTCTCTATCCAGATGTGGGACAGT
 TAATTGATGAGAAATTTACATCTCTTCAACTTAACACTACAATACTATGGCCATGCACAAGATGTTGA
 TACCTCAATGCTCAGACGGGCTATCTGGAATATATCCACTGCATGTTTGGAAATACGATACGACGACTAT
 GACTATGGGGAATTAACCAGCTGCTGGATCGTAGCTTTAAAGTTTACATCAAAAACCGTCTGTGCACTC
 CTGAAAAGGTTACAAAAGGATGTATGACAGCTTCTGGAGGCAGTTCAAGCACTCTGAGAAGGTCCATGT
 TAATCTGCTTCTATAGAAGCTAGGATGCAAGCAGAACTCTGTATGCTCTGAGAGCCATTACCCGGTAT
 ATGACC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG207897 representing NM_001013370
 Red=Cloning site Green=Tags(s)

MRLAAASNEAYAASLAVSELLSCHQCDDRQDEELGIRIPRPLGHGPSRFIPEKEMLQVGSEDAQMHAL
 FADSFAALGRLDNITLVMVFHPQYLESFLKTQHYLLQMDGPLPLHYRHYIGIMAAARHQCSYLVNLHVSD
 FLHVGGDPKWLNGLENAPQKLQNLGELNKVLAHRPWLITKEHIEGLLKAEEHSWSLAELVHAVVLLTHYH
 SLASFTEGCGISPEIHCDDGGHTFRPPSVSNYICDITNGNHSVDEMQRVNSAGNASVSDSFFVEALMEKM
 RQLQECREEEEEASQEEMASRFEMEKRESMFVFSDDDEVTPARDVSRHFEDTSYGKDFSRHGMHVPTFR
 VQDYCWEDHGYSLVNRLYPDVGQLIDEKFIHPYNLTNTMAMHKDVDTSMRLRAIWNYYIHCDFGIRYDDY
 DYGEINQLLDRSFVYIKTVVCTPEKVTKRMYSFWRQFKHSEKVVHVNLLLIEARMQAELLYALRAITRY
 MT

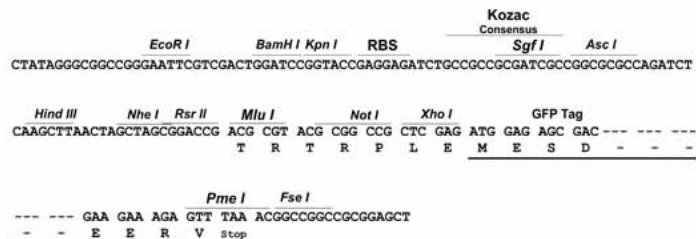
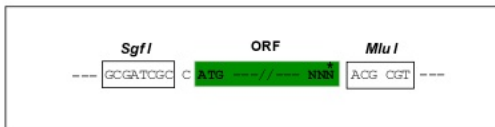
TRTRPLE - GFP Tag - V

Restriction Sites:

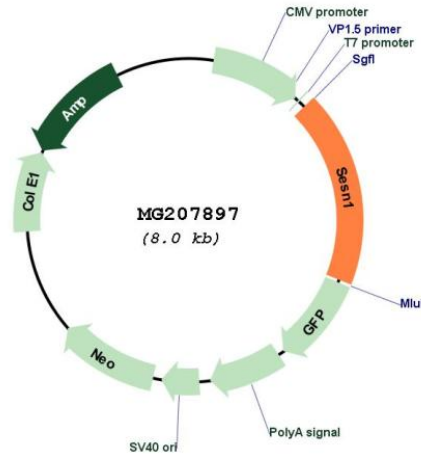
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM_001013370

ORF Size: 1476 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:	<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_001013370.1</u> , <u>NP_001013388.1</u>
RefSeq Size:	2608 bp
RefSeq ORF:	1479 bp
Locus ID:	140742
UniProt ID:	<u>P58006</u>
Cytogenetics:	10 22.77 cM
Gene Summary:	Functions as an intracellular leucine sensor that negatively regulates the TORC1 signaling pathway through the GATOR complex. In absence of leucine, binds the GATOR subcomplex GATOR2 and prevents TORC1 signaling. Binding of leucine to SESN2 disrupts its interaction with GATOR2 thereby activating the TORC1 signaling pathway (PubMed:25259925). This stress-inducible metabolic regulator may also play a role in protection against oxidative and genotoxic stresses. May positively regulate the transcription by NFE2L2 of genes involved in the response to oxidative stress by facilitating the SQSTM1-mediated autophagic degradation of KEAP1. May have an alkylhydroperoxide reductase activity born by the N-terminal domain of the protein. Was originally reported to contribute to oxidative stress resistance by reducing PRDX1. However, this could not be confirmed (By similarity).[UniProtKB/Swiss-Prot Function]