

Product datasheet for **MG216541**

Sesn1 (NM_001162908) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Sesn1 (NM_001162908) 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:

>MG216541 representing NM_001162908
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCTGAAGGAGAGAATGAAGCGAGATGGGAGGACTGTGCAGCAGAGACACGACTACTAGAGAGACAG
 CACTGGAAAACATTAGGCAGATCGTTTTGAGAAAACCGAATACCTTCGTTACAGCGAAAAGAGACACTTTC
 CCGACCTTCAGACGACTTTCAAACCGGTTTCTTTGGATGGGATGAATAAACTTCTTGCTCATCTGCTT
 ATGCTCTCTAAGAGATGTCCCTTAAAGATGTGCGAGAGAGAAGCGGGCTCATTCTGAAGAGCGTCGAGG
 AACTTGGAAATCAGAATCCCTCGGCCACTAGGACACGGACCAAGCAGGTTCCATCCAGAGAAGGAGATGCT
 GCAGGTGGGCAGTGAAGACGCACAGATGCATGCGTTATTTGCAGACTCCTTTGCTGCTTTGGGTCGTCG
 GATAACATCACATTAGTGATGGTTTTCCATCCACAATATTTAGAAAGTTTCTTAAAGACTCAACTACTACC
 TACTACAAATGGATGGGCCATTACCCCTCCATTATCGGCACTACATTGGAATCATGGCGGCAGCGAGGCA
 TCAGTGTTCTACCTGGTGAATCTGCATGTCAGTGACTTCTTCATGTTGGTGGGACCCCAAGTGGCTC
 AATGGTTTAGAGAATGCTCCTCAAAAATGCAGAACTTAGGAGAACTTAACAAAGTGTAGCCCATAGGC
 CTTGGCTGATTACCAAAGAACATATCGAGGGCCTTCTGAAAGCAGAGGAGCACAGCTGGTCTCTCGCCGA
 GCTGGTCCATGCCGTGGTTCTGCTCACACACTACCACTCTTTGCCTCCTTACATTTGGCTGTGGAATT
 AGTCCAGAGATTCATTGCGATGGTGGCCACACCTTCAGACCGCCTTCTGTTAGTAACTACTGCATCTGTG
 ACATTACAAATGGCAATCACAGTGTGGATGAGATGCAAGTCAACTCAGCAGGAAATGCTTCGGTAAGTGA
 TTCCTTCTTTGAGGTGGAAGCTCTCATGAAAAGATGAGGCAGTTACAGGAATGCCGAGAGGAGGAGGAG
 GCTAGCCAGGAGGAGATGGCGTCGCGGTTTGGATGAAAAGAGAGAGAGCATGTTTGTCTTCTTCCGG
 GCGATGTAAGTTACACCAGCAAGAGATGTGTCTCGGCACTTTGAGGACACTAGTTACGGCTACAAGGA
 TTTCTCCAGACACGGGATGCATGTCCCAACGTTTCGTGTCCAGGACTACTGCTGGGAAGACCATGGTTAC
 TCTCTGGTGAATCGTCTCTATCCAGATGTGGGACAGTTAATTGATGAGAAATTTACATTGCTTACAATC
 TAACTTACAATACTATGGCCATGCACAAAGATGTTGATACCTCAATGCTCAGACGGGCTATCTGGAACTA
 TATCCACTGCATGTTTGGAAATACGATACGACGACTATGACTATGGGGAAATTAACCAGCTGCTGGATCGT
 AGCTTTAAAGTTTACATCAAACCGTCGTGTGCACTCCTGAAAAGGTTACCAAAGGATGTATGACAGCT
 TCTGGAGGCAAGTCAAGCACTCTGAGAAGTCCATGTTAATCTGCTTCTTATAGAAGCTAGGATGCAAGC
 AGAACTCTGTATGCTCTGAGAGCCATTACCCGGTATATGACC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG216541 representing NM_001162908
 Red=Cloning site Green=Tags(s)

MAEGENEARWEGLCSRDTTRETALENIRQIVLRKTEYLRSAKETLSRPSDGLSNAVSLDGMNKLALHLL
 MLSKRCPFKDVRERSGLILKSVEELGIRIPRPLGHGPSRFIPEKEMLVQGSEDAQMHALFADSFALGRL
 DNITLVMVFHPQYLESFLKTQHYLLQMDGPLPLHYRHYIGIMAAARHQCSYLVNLHVSDFLHVGDPKWL
 NGLLENAPQKLQNLGELNKVLAHRPWLITKEHIEGLLKAEEHSWSLAELVHAVVLLTHYHSLASFTFGCGI
 SPEIHCDDGGHFRPPSVSNYICDITNGNHSVDEMQRVNSAGNASVSDSFFVEALMEKMRQLQECREEEE
 ASQEEMASRFEMEKRESMFVSSGDDEVTPARDVSRHFEDTSYGYKDFSRHGMHVPTFRVQDYCWEDHGY
 SLVNRLYPDVGQLIDEKFHIAYNLTNTMAMHKVDVTSMLRRAIWNYYIHCMTGIRYDDYDGEINQLLDR
 SFKVVYIKTVVCTPEKVTKRMYSFWRQFKHSEKVHVNLLLIEARMQAELLYALRAITRYMT

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:



ACCN: NM_001162908

ORF Size: 1653 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_001162908.1](#), [NP_001156380.1](#)

RefSeq Size: 3182 bp

RefSeq ORF: 1656 bp

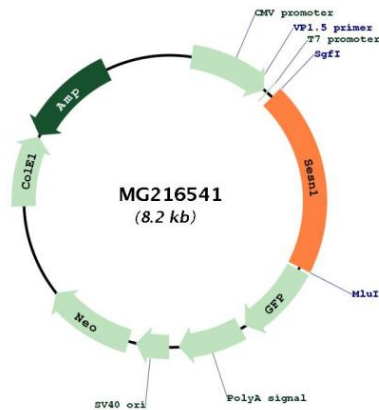
Locus ID: 140742

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]

Product images:



Circular map for MG216541