

Product datasheet for **MR216541**

Sesn1 (NM_001162908) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Sesn1 (NM_001162908) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Sesn1
Synonyms:	1110002G11Rik; AU044290; Pa26; Sest1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



[View online »](#)

ORF Nucleotide Sequence:

>MR216541 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGCTGAAGGAGAGAATGAAGCGAGATGGGAGGACTGTGCAGCAGAGACACGACTACTAGAGAGACAG
 CACTGGAAAACATTAGGCAGATCGTTTTGAGAAAACCGAATACCTTCGTTACAGCGAAAGAGACACTTTC
 CCGACCTTCAGACGACTTTCAAACCGGTTTCTTTGGATGGGATGAATAAACTTCTTGCTCATCTGCTT
 ATGCTCTCTAAGAGATGTCCTTTAAAGATGTGCGAGAGAGAAGCGGGCTCATTCTGAAGAGCGTCGAGG
 AACTTGGAAATCAGAATCCCTCGGCCACTAGGACACGGACCAAGCAGGTTCCATCCAGAGAAGGAGATGCT
 GCAGGTGGCAGTGAAGACGCACAGATGCATGCGTTATTTGCAGACTCCTTTGCTGCTTTGGGTCGTCG
 GATAACATCACATTAGTGATGGTTTTCCATCCACAATATTTAGAAAGTTTCTTAAAGACTCAACTACTACC
 TACTACAAATGGATGGGCCATTACCCCTCCATTATCGGCACTACATTGGAATCATGGCGGCAGCGAGGCA
 TCAGTGTCTACCTGGTGAATCTGCATGTCAGTGACTTCTTCATGTTGGTGGGACCCCAAGTGGCTC
 AATGGTTTTAGAGAATGCTCCTCAAAAATGCAGAACTTAGGAGAACTTAACAAAGTGTAGCCCATAGGC
 CTTGGCTGATTACCAAAGAACATATCGAGGGCCTTCTGAAAGCAGAGGAGCACAGCTGGTCTCTCGCCGA
 GCTGGTCCATGCCGTGGTTCTGCTCACACACTACCACTCTCTTGCTCCTTACATTTGGCTGTGGAATT
 AGTCCAGAGATTCATTGCGATGGTGGCCACACCTTCAGACCGCCTTCTGTTAGTAACTACTGCATCTGTG
 ACATTACAAATGGCAATCACAGTGTGGATGAGATGCAAGTCAACTCAGCAGGAAATGCTTCGGTAAGTGA
 TTCCTTCTTTGAGGTGGAAGCTCTCATGAAAAGATGAGGCAGTTACAGGAATGCCGAGAGGAGGAGGAG
 GCTAGCCAGGAGGAGATGGCGTCGCGGTTTGGATGAAAAGAGAGAGAGCATGTTTGTCTTCTCTTCGG
 ACGATGATGAAGTTACACCAGCAAGAGATGTGTCTCGGCACTTTGAGGACACTAGTTACGGCTACAAGGA
 TTTCTCCAGACACGGGATGCATGTCCCAACGTTTCGTGTCCAGGACTACTGCTGGGAAGACCATGGTTAC
 TCTCTGGTGAATCGTCTCTATCCAGATGTGGGACAGTTAATTGATGAGAAATTTACATTGCTTACAATC
 TAACCTACAATACTATGGCCATGCACAAAGATGTTGATACCTCAATGCTCAGACGGGCTATCTGGAACTA
 TATCCACTGCATGTTTGGAAATACGATACGACGACTATGACTATGGGGAAATTAACCAGCTGCTGGATCGT
 AGCTTTAAAGTTTACATCAAACCGTCGTGTGCACTCCTGAAAAGGTTACCAAAGGATGTATGACAGCT
 TCTGGAGGCAGTCAAGCACTCTGAGAAGTCCATGTTAATCTGCTTCTTATAGAAGCTAGGATGCAAGC
 AGAACTCTGTATGCTCTGAGAGCCATTACCCGGTATATGACC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR216541 protein sequence
 Red=Cloning site Green=Tags(s)

MAEGENEARWEGLCSRDTTTRTALENIRQIVLRKTEYLRSKETLSRPSDGLSNAVSLDGMNKLALHLL
 MLSKRCPFKDVRERSGLILKSVEELGIRIPRPLGHGSRFIPKEMLQVSEDAQMHAFADSFALGRL
 DNITLVMVFHPQYLESFLLKTHYLLQMDGPLPLHYRHYIGIMAAARHQCSYLVNLHVSDFLHVGDPKWL
 NGLENAPQKLQNLGELNKVLAHRPWLITKEHIEGLLKAEHWSLAELVHAVVLLTHYHSLASFTEGCGI
 SPEIHCDDGGHTFRPPSVSNYICDITNGNHSVDEMQVNSAGNASVSDSFFFEVEALMEKMRQLQECREEEE
 ASQEEMASRFEMEKRESMFVSSDDDEVPARDVSRHFEDTSYGKDFSRHGMHVPTFRVQDYCWEDHGY
 SLVNRLYPDVGQLIDEKFHIAYNLTNTMAMHKDVTSMRLRAIWNYYIHCMTGIRYDDYDGEINQLLDR
 SFKVYIKTVVCTPEKVTKRMYDSFWRQFKHSEKVVHVNLLIEARMQAELLYALRAITRYMT

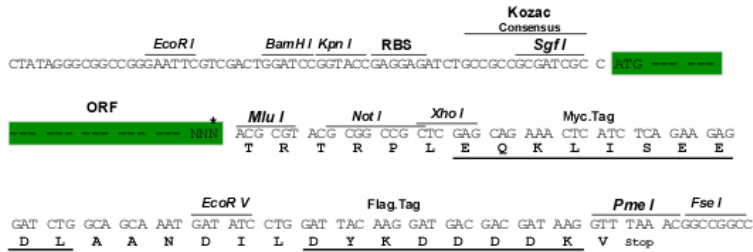
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

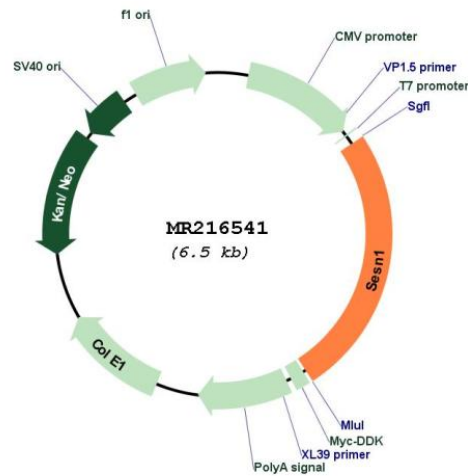
Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:



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:	<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:	NM_001162908.1 , NP_001156380.1
RefSeq Size:	3182 bp
RefSeq ORF:	1656 bp
Locus ID:	140742
Cytogenetics:	10 22.77 cM
MW:	63.6 kDa
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]