

Product datasheet for **MC200569**

Sesn2 (NM_144907) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Sesn2 (NM_144907) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Sesn2
Synonyms:	HI95; Ses2; SEST2
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >BC005672 sequence for NM_144907
 GGGATGGTGAGGAGCGCCGGCTTCCCGAGCAGCGCTGGCCACTGCGGACTTCGAGGCACTCCGGGCCGT
 GAAAACCTCTGCGCCGCGGCAATCTCAGGCCTCCGAGGCCGGCCGAGTTTTCCAAGCTGGGCTGAAAAG
 GAGTGTCTATCGCCGTAGCGCCGGTTCTCTAATCCCCGAGAGACAGCCCGGGGATCTCGAGCTTCCCGG
 CGACCCCTAGTCCCGCCTCCTGTGCGCGCCGACCTAGACCCCTCGGGTGTCCAGGCGCGGACGAGCC
 GCGGCCGGGTCTGGCGTACACCATGATCGTAGCGGACTCCGAGTGCCATTCCGAGATCAAGGGCTACCT
 GCGTCTCAGAGGGCCAGCGCTTTTCATTCCAGTGGAAGAGATCCTTCGGGAAGGAGCTGAGAGCCTGGAGC
 AGCACCTGGGGCTCGAGGCCCTGATGTCCTCAGGGCGGGTGGACAACCTGGCGGTGGTATGGGTCTACA
 CCCGGACTACCTTAGCAGCTTCTGGCGCTGCATTACCTGCTGCTGCATACGGATGGGCCCTGGCCAGC
 TCCTGGCGCCACTACATTGCCATCATGGCTGCTGCCCGTACCAGTGTTCTTACCTGGTGGGTTCCACA
 TGACTGAGTTCCTGCAGACCGCGGTGACCCCGAGTGGCTGCTGGGCCTTACCAGGGCCCTGAGAAGCT
 CCGCAAGCTCAGCGAGGTCAACAAGTTACTGGCGCATCGCCGTGGCTCATACCAAGGAGCATATCCAG
 GCCTTGCTGAAGACTGGCGAGCACAGTGGTCCCTGGCCGAACCTATCCAAGCACTGGTCTGCTTACCC
 ACTGCCACTCTTGGCCTCCTTTGTGTTGGCTGTGGAATACTTCTGAGGGAGATGCAGAGGGCAGCCC
 TGCTCCAGGCACCTTCGCTCCAGTGAGCAAGGCACCCCGAGCGGGGACCCACTGAACAACCTCA
 GGGGGCTTTGAAGCCGCTCGTGACGTAGAAGCTCTGATGGAACGCATGAGGCAGCTTCAGGAGAGCTGC
 TGCGGGATGAGGGGGCTTCGAGGAGGAAATGGAGAACCCTTTGAGCTGGAGAAGTCAAGAAAGCCTGCT
 GGTGACCCCTCAGCGGATATCTGGAGCCTTCTCCACACCCAGACATCTATGCTTTGTGGAGGACCC
 GCATTTGGATATGAAGACTTCACTCGTCGAGGGACTCAGGCGCCCCAACCTTCCGTGCCAGGATTATA
 CCTGGGAAGACCATGGCTACTCGCTGATCCAGAGGCTCTACCCTGAGGGAGGGCAGCTGCTGGATGAGAA
 GTTCCAGGTAGCCTGCAGCCTCACCTATAACACCATCGCCATGCACAGTGGCGTGGACACCTCCATGCTC
 CGCAGGGCCATCTGGAACACTACATCCACTCGCTTTGGCATCAGATACGATGACTATGATTACGGCGAGG
 TAAACCAGCTCCTGGAACGGAACCTCAAAATCTATATCAAGACGGTGGCCTGCTACCCTGAGAAGACGAC
 CCGTAGGATGTACAACCTCTTTGGAGGCACTCCGCCACTCAGAGAAGGTTTATGTGAACCTTGGTCTC
 CTTGAAGCCCGCATGCAAGCGGCCCTGCTCTATGCCCTGCGCGCCATCACCCGCTACATGACCTGACTAC
 CCCGTACGCAGGACCAGCACAGGAGCAGCTGACCCTGGTCCACCGTCTCTGTGCAAGGACTTCTGTGT
 CTGGAGACAGATCTGGGAAGGACCCTTTCTGTCTCATGTCTATCCACCACATGCTGGGGATGGGCATGTC
 TGTGGCCCCAGGCAGCCATCAGGGCAAGCCACATTTTCTTTTCTCACTGGACTGAACAGGACCGTCGC
 ACTGACTTTGGGTCTGAGCTCTGTACCTGGAGCTGGAAGAAGATTTCGAAAGGCCAAGGGCCACATCCC
 CTTTTCTCCCTGCTCCTAAAAGCAGAGGAAGGCTACAGAGCTAAGGCTGGGCCCCAGGCACCACAAAA
 GCTGCCTTCTGGACTGGGAAGCCCTGCTGCCTGTGTGGGAGAGGAGTAAGGACTCCAGGGACTAGC
 ACTCCAGGAAGTTTGCCTTCCCGCCTTCCCTCCTTCTCATTCTCCAGTTTCATCAGCCCCCAACCTGC
 CTCCCACCCATCAATGTGAAAGTTGGACTCACAGCTGGTCTGTGTGCCAGTTCCCTTAGAGCCTGTTCT
 GCTGGGACGCTGTTCTTTGGTTACCTGAGTAGGGTTTCACTTCTGTCTCCTTTGCCCTCATACCCCT
 TTTCTCCCATGCCTGGTGGTGTGGGGCCTGGGAGAGGGGCCAAACATATCCAAAGAACACACTGTCTGT
 GAGAGTTGGAGCCCGTGGTGGTCTCCCTGCTGTCTGAAGAGTAAGGAGTGGCTGTTGGTGAACCTGTAT
 TTGGGTCTTGAGGACCTCACTGTGGAGCCAGAGTCAATCTGTCCCTCTAGATGGTATTGCCACACGGAGG
 CTGGCATCCTGACCTCCTTATCCCTTGGGTTCTGCCAAGAATGCTTGCCAAAAACAACAACAAAAAAA
 AAAAAAAAAAAAAAAAAA

Restriction Sites: RsrII-NotI

ACCN: NM_144907

Insert Size: 1443 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

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:	BC005672 , AAH05672
RefSeq Size:	2677 bp
RefSeq ORF:	1443 bp
Locus ID:	230784
UniProt ID:	P58043
Cytogenetics:	4 D2.3
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:18692468, PubMed:25259925). This stress-inducible metabolic regulator also plays a role in protection against oxidative and genotoxic stresses. May negatively regulate protein translation in response to endoplasmic reticulum stress, via TORC1 (PubMed:24947615). 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 (PubMed:23274085). May also mediate TP53 inhibition of TORC1 signaling upon genotoxic stress (PubMed:18692468). Has an alkylhydroperoxide reductase activity born by the N-terminal domain of the protein (By similarity). Was originally reported to contribute to oxidative stress resistance by reducing PRDX1 (By similarity). However, this could not be confirmed (By similarity).[UniProtKB/Swiss-Prot Function]