

Product datasheet for **MG215232**

Selenon (NM_029100) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Selenon (NM_029100) Mouse Tagged ORF Clone
Symbol:	Selenon
Synonyms:	1110019I12Rik; AI414492; Se; SeIN; Sepn1
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide Sequence:

>MG215232 representing NM_029100
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGGCCAGGCCAGGCCCGCAGCGCGCCGCCCGCACAGCCCGGACCCCGCGCTCAGCCCGCCTCCAC
 GCCGCCGCGCCCGCGCCCTGGCGCTGCTCGGAGCCCTGCTGGCGGCCCGCCGCTGTCGCCGCTGCCG
 GGCTGCGCGCTCCTCGCCGACGCCAGCGCGCCGCGCGCAGGAATCGGCATTAAGGTCTGGGACA
 GATGGCCTCTTTCTTTTCTCGCTGGACTGACCAGGATATGTACATCAGTCCGGAGGAATCAAAC
 CCATTGCGGAGAACTGACAGGGTCAGTTCCTGTGGCAACTACGAGGAGGAGAACTGCCCATGACCC
 CAGCGAGGAGACTCTTACCATAGAAGCCGATTCCAGCCTCTGCTCATGGAGACCATGACAAAAGCAA
 GATGGCTTCTAGGGTCTCCCGCTCGCTGTCCGGCTCCGCAACTGGACCACAGCAGCCTCGCCGA
 GTGCAGCGTTTGTGCCGCCACTTCCGGCCCTTCTGCCCTCCAGGTGAGGAGCTGGCCAGCCCTG
 GTGGATTATCCCGGGGAGCTGAGCGTCTTACGGGCTATTTGTCCAACAACCGTCTACCCACCACCG
 CCCAAGGCAAGGAGGTCATCATCCATCGCCTGTTAAGCATGTTCCATCCACGCCCTTCGTGAAGACC
 GCTTTGCCCTCAGGGCACCGTGGCCTGTCTGACTGCCATCAGCGATTCTACTACACCGTGATGTTCCG
 GATCCACGCGGAGTTTACGCTCAGCGAGCCTCTGACTTCCCCTTCTGGTTCTCGCCCGCCAGTTCACC
 GGCCATATCATCTTATCCAAAGATGCTACACACATCCGTGACTTCAGGCTGTTTGTGCCAATCACAGGT
 CCCTGAATGTGGACATGGAGTGGCTGTATGGGGCAGTGAGACCAGCAACATGGAGTGGACATTGGCTA
 CGTCCCCCAGATGGAGCTGGAGGCTGTGGGCCCTCGTGCCCTCTGTGATCCTAGATGAGGACGGCAAC
 ATGATTGACAGCCGCTGCCCTCAGGAGAACCCTCCAGTTTGTGTTTGGAGAGATCAAGTGGCATCAGG
 AGCTGAGCTGGGAAGAGGCTGCCCGCGCCTGGAGTGGCCATGTATCCCTTCAAGAAGTCAACTACCT
 GCCGTTACGGAGGCCTTTGACAGAGCCAGAGCTGAGAAGAACTTGTTCATTCCATCTTGCTGTGGGG
 GCCCTGGACGACAGTCTGCTGAGGTTCCGGGCGGACTCTCCGGGAGACTGTCTGAAAGCCGCCCA
 TCCTCACTCTCTCAATGAGAGTTCATCAGTACCTGGTCCCTGGTAAAGGAGCTAGAAGACCTGCAGAC
 CCAGCAGGAGAACCCTCCACAGGAGCTGGCAGGCTGCACTTGGAGAAGTACAGTTTCTGTAGAG
 ATGATGATCTGTGCCAACGGCACTGTGGTCCACCACATCAATGCCAATACTTCTTACATCACCT
 CCATGAAGCTGAAGACATGGAGAATAAATACGTCTTACGCTTCTCATCCAGCTTGGAGACCCGTCAC
 AGCTACCTACATGCAGTCTCTGAGGAAGGACTCCGGCGGGCCCTGCCCTCTCCAGCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG215232 representing NM_029100
 Red=Cloning site Green=Tags(s)

MGQARPAARRPHSPDPAQPAPRRRRARALALLGALLAAAAVAAARACALLADAQAAARQESALKVLGT
 DGLFLFSSLDTDQDMYISPEEFKPIAEKLTGSVPVANYEEEEELPHDPSEETLTIEARFQPLLMETMTKSK
 DGFLGVSRLALSGLRNWTTAASPSAAFAARHFRPFLPPPGQELGQPWWIIPGELSVFTGYLSNNRFYPPP
 PKGKEVI IHRLLSMFHPRPFVKTRFAPQGTVACLTAISDSYYTVMFRIHAEFQLSEPPDFPWFSPGQFT
 GHIILSKDATHIRDFRLFVFNHRS LNVDMEWL YGASETSNMEVDIGYVPQMELEAVGPSVPSVILDEDGN
 MIDSRLPSGEPLQVFVEEIKWHQELSWEEAARRLEVAMYPFKKNYL PFTAFDRARA EKKLVHSILLWG
 ALDDQSC*GSGRTLRETVLESPPILTLLNESFISTWLVKELEDLQTQENPLHRQLAGLHLEKYSFPVE
 MMICLPNGTVVHHINANYFLDITSMKPEDMENNVSFSSSFEDPSTATYMQFLREGLRRLPLLQP

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

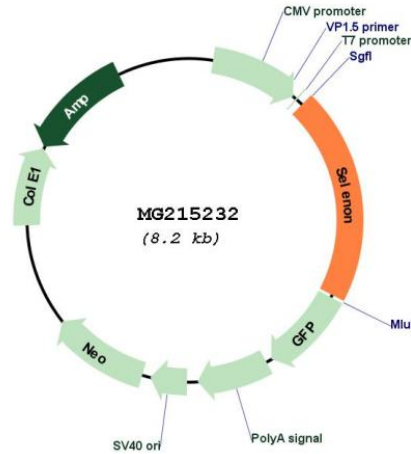
Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM_029100

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](#) The expression of this clone is not guaranteed due to the nature of selenoproteins.

OTI Annotation: This clone encodes a selenoprotein containing the rare amino acid selenocysteine (Sec). Sec is encoded by UGA codon, which normally signals translational termination. Expression of this clone is not guaranteed due to the nature of selenoproteins.

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_029100.2](#), [NP_083376.2](#)

RefSeq Size: 3461 bp

RefSeq ORF: 1674 bp

Locus ID: 74777

UniProt ID: [D3Z2R5](#)

Cytogenetics: 4 D3

Gene Summary: This gene encodes a glycoprotein that is localized in the endoplasmic reticulum. It plays an important role in cell protection against oxidative stress, and in the regulation of redox-related calcium homeostasis. Mutations in the orthologous gene in human are associated with early onset muscle disorders, referred to as SEPN1-related myopathy. Knockout mice deleted for this gene exhibit abnormal lung development. This protein is a selenoprotein, containing the rare amino acid selenocysteine (Sec). Sec is encoded by the UGA codon, which normally signals translation termination. The 3' UTRs of selenoprotein mRNAs contain a conserved stem-loop structure, designated the Sec insertion sequence (SECIS) element, that is necessary for the recognition of UGA as a Sec codon, rather than as a stop signal. A second stop-codon redefinition element (SRE) adjacent to the UGA codon has been identified in this gene (PMID:15791204). SRE is a phylogenetically conserved stem-loop structure that stimulates readthrough at the UGA codon, and augments the Sec insertion efficiency by SECIS. [provided by RefSeq, Dec 2016]