

Product datasheet for **RR200391**

Selenop (NM_019192) Rat Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Selenop (NM_019192) Rat Tagged ORF Clone
Symbol: Selenop
Synonyms: Sepp1
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >RR200391 representing NM_019192
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTGGAGAAGCCTAGGGCTTGCCTGGCTCTCTGTCTCCTCCCCTATGGAGGAGCAGAGAGCCAAGGCC
AAAGCCCTGCTTGTAAAGCAAGCTCCACCCTGGAACATAGGAGATCAAAATCCAATGCTAAACTCCGAGGG
CACAGTGACAGTGGTTGCTCTTCTTCAAGCCAGCTGATACCTGTGCCTTCTGCAGGCATCCAGATTGGAA
GACCTGCGAATAAACTAGAGAACCAAGGATATTTAACATCTCCTATATTGTTGTTAATCATCAAGGAT
CTCCTTCCCAATTAACATGCACATCTTAAAAAGCAGGTGTCAGATCACATTGCTGTTTACAGACAAGA
TGAACATCAAACAGATGTCTGGACACTCTTAAATGGAAACAAAGATGACTTCTCATATATGACAGATGT
GGCCGTCTTGTGTATCACCTTGGTTTGCCTACTCCTTCCTCACTTTCCCGTATGTTGAAGAAGCCATCA
AGATCGCTTACTGTGAGAAGAGGTGTGGAACTGCTCTTTCACGAGTCTTGAAGATGAAGCCTTCTGTAA
AAACGTGTCTCGGCTACTGCAAGTAAACCACAGAGCCCTCAGAGGAGCATAACCACCACAAGCACCAT
GACAAACATGGGCATGAGCATCTTGGGAGCAGTAAGCCTTCAGAGAATCAGCAACCAGGGGCATTAGATG
TTGAGACAAGTCTTCTCCTTCAGGCTTGACCACCACCACCACCATAAGCACAAGGGCCAGCACAG
GCAGGGTCACTTAGAGAGCTGAGACATGGGGCAAGTGAAGGCTTGCAACTTTCCTTGCCAGAGGAAG
CTCTGACGAAGGGGATGCATAAACCAGCTCCTGTGTAAGTTATCTGAGGAGTCTGGGCAGCTACCAGTA
GCTGCTGCTGCCACTGCCGACACCTCATATTTGAGAAAGTCAAGATCTGCAATCACTTACAGTGTGCCGA
AAACCTCCATCCTTGTGTAGCTGACAGGGCTTTTCGCGGAGGAAAGTCATTGAATCCTGTCAATGT
AGATCACCTCCAGCTGCCTGACACAGTCAGCATGTAAGCCCCACAGAAGCCAGCCCCAACTGAAGCTGAA
ATAATAAGACCAAGAAGTAAAAATGAAATTTGAAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RR200391 representing NM_019192
 Red=Cloning site Green=Tags(s)

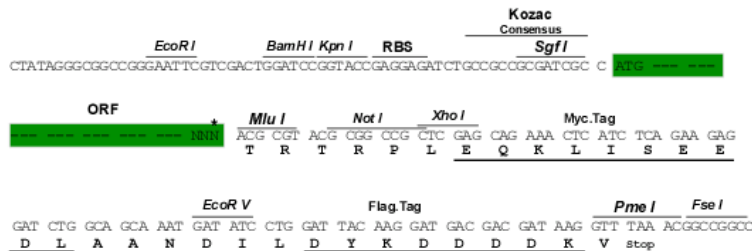
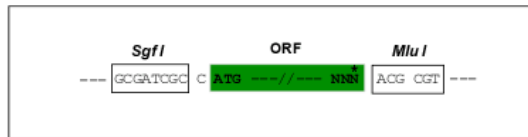
MWRSLLGLALALCLLPYGGAESQGGSPACKQAPPWNIGDQNPMLNSEGTVTVVALLQAS*YLCLLQASRLE
 DLRIKLENQGYFNI SYIVVNHQGSFSQLKHAHLKKQVSDHIAVYRQDEHQTDVWTLNNGNKDDFLIYDRC
 GRLVYHLGLPYSFLTFPYVEEAIKIAYCEKRCGNCSFTSLEDEAFCKNVSSATASKTTEPSEEHNHHKHH
 DKHGHEHLGSSKPSNQPGALDVETSLPPSGLHHHHHHKHKQHRQGHLES*DMGASEGLQLSLAQRK
 L*RRGCINQLLCKLSEESGAATSSCCCHRHILFEKSGSAIT*QCAENLPSLCS*QGLFAEEKVIESQC
 RSPAA*HSQHVSPTEASPN*S*NNKTKK*K*NLN

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_019192

ORF Size: 1155 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](#) 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_019192.2](#), [NP_062065.2](#)

RefSeq Size: 2043 bp

RefSeq ORF: 1158 bp

Locus ID: 29360

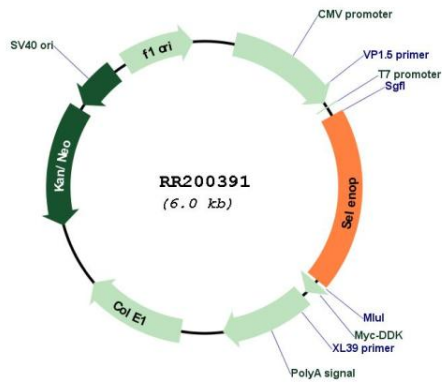
UniProt ID: [P25236](#)

Cytogenetics: 2q16

MW: 42.8 kDa

Gene Summary: This gene encodes a selenoprotein that is predominantly expressed in the liver and secreted into the plasma. This selenoprotein is unique in that it contains multiple selenocysteine (Sec) residues per polypeptide (10 in rat), and accounts for most of the selenium in plasma. It has been implicated as an extracellular antioxidant, and in the transport of selenium to extra-hepatic tissues via apolipoprotein E receptor-2 (apoER2). Mice lacking this gene exhibit neurological dysfunction, suggesting its importance in normal brain function. 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. The mRNA for this selenoprotein contains two SECIS elements. Alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Feb 2017]

Product images:



Circular map for RR200391