

Product datasheet for **RN210406**

Msrb1 (NM_001044285) Rat Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Msrb1 (NM_001044285) Rat Untagged Clone
Symbol: Msrb1
Synonyms: selX; Sepx1
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >RN210406 representing NM_001044285
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTCGTTCTGCAGTCTCTCGGAGGCGAGGTCTCCAGAATCACTTCGAGCCAGGCGTCTACGTGTGTG
CCAAGTGGCGCTATGAGCTGTTCTCCAGTCGCTCGAAGTACGCACACTCATCCCCATGGCCAGCATTAC
TGAACCATCCACGAGGACAGTGTGGCCAAGTGCCCTGAGAAAAACCGACCGGAAGCTTTAAAGGTGTCC
TGTGGCAAGTGTGGCAATGGGTTGGGCCACGAGTTCCTCAATGACGGCCCAAGCGGGGACAGTCGAGGT
TCTGAATATTCAGCAGTCTCTGAAGTTCATCCCCAAAGGCAAAGAAGCTCCTGCCTCCAGGGAGACTA
G

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_001044285
Insert Size: 351 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). The 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).



[View online »](#)

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_001044285.2](#), [NP_001037750.2](#)

RefSeq Size: 889 bp

RefSeq ORF: 351 bp

Locus ID: 685059

UniProt ID: [Q52KJ8](#)

Cytogenetics: 10q12

Gene Summary: The protein encoded by this gene belongs to the methionine-R-sulfoxide reductase B (MsrB) family. Members of this family function as repair enzymes that protect proteins from oxidative stress by catalyzing the reduction of methionine-R-sulfoxides to methionines. This protein is highly expressed in liver and kidney, and is localized to the nucleus and cytosol. It is the only member of the MsrB family that is a selenoprotein, containing a selenocysteine (Sec) residue at its active site. It also has the highest methionine-R-sulfoxide reductase activity compared to other members containing cysteine in place of 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. [provided by RefSeq, Oct 2016]