

Product datasheet for **RC201020**

Methionine Sulfoxide Reductase B (MSRB1) (NM_016332) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Methionine Sulfoxide Reductase B (MSRB1) (NM_016332) Human Tagged ORF Clone
Symbol:	Methionine Sulfoxide Reductase B
Synonyms:	HSPC270; SELENOR; SELENOX; SELR; SELX; SepR; SEPX1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC201020 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTCGTTCTGCAGCTTCTTCGGGGCGAGGTTTTCCAGAATCACTTTGAACCTGGCGTTTACGTGTGTG
CCAAGTGTGGCTATGAGCTGTTCTCCAGCCGCTCGAAGTATGCACACTCGTCTCCATGGCCGGCGTTTAC
CGAGACCATTACGCCGACAGCGTGGCCAAGCGTCCGGAGCACAATAGATCTGAAGCCTGAAGGTGTCC
TGTGGCAAGTGTGGCAATGGGTTGGCCACGAGTTCCTGAACGACGGCCCAAGCCGGGGCAGTCCCGAT
TCTGAATATTCAGCAGCTCGCTGAAGTTGTCCCTAAAGGCAAAGAACTTCTGCCTCCAGGGTCACT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:	>RC201020 protein sequence Red=Cloning site Green=Tags(s)
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MSFCSFFGGVEVFQNHFEFGVYVCAKCGYELFSSRSKYAHSSPWPFAFTETIHADSVAKRPEHRNSEALKVS
CGKCGNGLGHEFLNDGPKPGQSRF*IFSSSLKFVPKGKETSASQGH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:	https://cdn.origene.com/chromatograms/mk6395_f02.zip
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Restriction Sites:	Sgfl-MluI
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Cloning Scheme:


ACCN: NM_016332

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_016332.4](#)

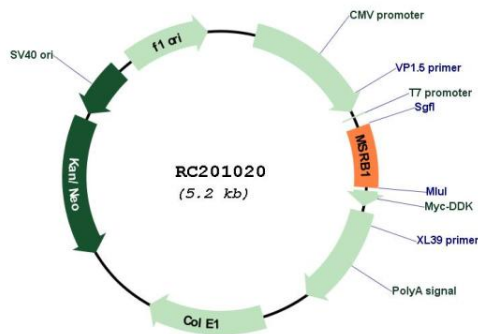
RefSeq Size: 1386 bp

RefSeq ORF: 351 bp

Locus ID: 51734
UniProt ID: [Q9NZV6](#)
Cytogenetics: 16p13.3
Domains: SelR

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. A pseudogene of this locus has been identified on chromosome 19. [provided by RefSeq, Aug 2017]

Product images:



Circular map for RC201020