

## Product datasheet for SC114321

### Methionine Sulfoxide Reductase B (MSRB1) (NM\_016332) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Methionine Sulfoxide Reductase B (MSRB1) (NM_016332) Human Untagged Clone
Symbol:	Methionine Sulfoxide Reductase B
Synonyms:	HSPC270; SELENOR; SELENOX; SELR; SELX; SepR; SEPX1
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC114321 sequence for NM_016332 edited (data generated by NextGen Sequencing) ATGTCGTTCTGCAGCTTCTTCGGGGGCGAGGTTTTCCAGAATCACTTTGAACCTGGCGTT TACGTGTGTGCCAAGTGTGGCTATGAGCTGTTCTCCAGCCGCTCGAAGTATGCACACTCG TCTCCATGGCCGGCGTTACCGAGACCATTACGCCGACAGCGTGGCCAAGCGTCCGGAG CACAATAGATCTGAAGCCTTGAAGGTGTCTGTGGCAAGTGTGGCAATGGGTTGGGCCAC GAGTTCCTGAACGACGGCCCAAGCCGGGGCAGTCCCATTCTGAATATTCAGCAGCTCG CTGAAGTTGTCCCTAAAGGCAAAGAACTTCTGCCTCCCAGGGTCACTAG
5' Read Nucleotide Sequence:	Clone variation with respect to NM_016332.2 >OriGene 5' read for NM_016332 unedited GGTGCATATTTTGAATACGACTCACTATAGNNGCGGCGGCGNAATTCGGCACGAGGG GCAAGCGCGTGCAGTTCCGGTGGCGCCATGTCGTTCTGCAGCTTCTTCGGGGGCGAGGT TTTCCAGAATCACTTTGAACCTGGCGTTTACGTGTGTGCCAAGTGTGGCTATGAGCTGTT CTCCAGCCGCTCGAAGTATGCACACTCGTCTCCATGGCCGGCGTTCACCGAGACCATTCA CGCCGACAGCGTGGCCAAGCGTCCGGAGCACAATAGATCTGAAGCCTTGAAGGTGTCTGT TGGCAAGTGTGGCAATGGGTTGGGCCACGAGTTCCTGAACGACGGCCCAAGCCGGGGCA GTCCCGATTCTGAATATTCAGCAGCTCGCTGAAGTTTGTCCCTAAAGGCAAAGAACTTC TGCTCCCAGGGTCACTAGGCGGGCAGCCACACCCACCCAGACGGTCAACCACACTGAG GCCACAGTTGGCCATTCACCTTGGAGTTGGAACCTGCGCGTGCAGACAGGAAGGCAG GGCGCAGTGGTTGAAACATCAGGACACTCCAAGGCCCGGCTCTGAACAAGACCTTTTC GTTTCTTGAAAAGAGACTCATTTGCTGATGGTTCATGCCTTCTGCTGGGACAGGCCTGT GCTGTGCAGCCACTGTGGCTGACTTAGCCCTGCTCACTCTAGGTGCCTCCAGGAG GTGAGCCCTGNGTGCAGCCTGGTCTCTGAATGACGTTACACCCTCACCTTCTTTCTGG CCCTGTCTCTTGAACCTCCCCTGTGAGGGCCCAATTTACAGACAGACTCTCGTCTCA CCGAAGCCTTAGCCACATTTCCAGGCTGTTATGAGACAGAATGGAACGGAGGCCGG CCCTGTCAACCGCA



[View online »](#)

<b>3' Read Nucleotide Sequence:</b>	>OriGene 3' read for NM_016332 unedited TTGTCTAGGCTATTCCCCTGCTTACTCCATAAGTAATTAATAGGGGGTGATTTCAGCATCACCCACCCTCCTATATGGCCAGGCCTCCGAGCATGTACAGTAAGGCACAGTCACCACACCTTGGGAAGGGCCTCCCTGCATGTGTGCACTGCATGCCTCATCCCTGTGCTGGTTAGAGTTATGGAGCAACAGCCGCTTTCCTAAGCAGAAGTGATGCAAGCTACTCCGCACAGATTGTGAAAACAGGGTTTATGTTTCTCCCCTCGTGGACGAGATGCCAAGGGTGTGCCCCATCATCCTGCCTTCCCAGCAGGTCACAGACCATCCCCTCTGGCTGGCCTGGAAGGGTTTGAACAGACGGATCATGCAGTGACCAGAGCCAGGGCGGCTGGCAGGGCGGCCTCCGTTTCCATTCTGTCTCCTAAGCAGCCTGAGAGATGTGGGCCTAAGCTTCGGTGATGACGAGAGTCTGTCTTGGAAATGGGCCTCACAGGGGAGAGTCCAGAGACAGGGCCAGGAAAAGAATGTGAGGGTGAACGTCATTCATAGACCAGCTGCACCCATAGCTCACCTCCTGGATGCACCTATAGTGATCATGGGGCTAAGTCAGCCGACAGTGTGGCTGCACAGCCCATGCCTGTCCCATCAGATAGCATGAACCATCAGCATATGAGTCTCTTCCAAGAACGAAAAGGTCTGTTTCATATCCGAGCCTTGAGAGTGTCTAGATGTTCACTGCGCCCTGCCTTCTGTCTCGACGCCCATGGTTCAACTNCATGTGGAATGGCCAACGTGTGGNCCTCATGTGTGGCCGTCTGGGGTGGTGTGGGCTGCCCGCTATGACCCTGGAAGCANAAGTTTCTTTGCCTTTAGGACAAATTCACCGAGCTGCTGAAATCCAATCTGGACTGCCCCGCTTGAGCCGTGCTCAGGACTCCTGCCACCCATGC
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_016332
<b>Insert Size:</b>	1360 bp
<b>OTI Disclaimer:</b>	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.
<b>OTI Annotation:</b>	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.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">NM_016332.2</a> , <a href="#">NP_057416.1</a>
<b>RefSeq Size:</b>	1386 bp
<b>Locus ID:</b>	51734
<b>UniProt ID:</b>	<a href="#">Q9NZV6</a>

**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]