

Product datasheet for SC115458

Selenophosphate synthetase 2 (SEPHS2) (NM_012248) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Selenophosphate synthetase 2 (SEPHS2) (NM_012248) Human Untagged Clone
Symbol:	Selenophosphate synthetase 2
Synonyms:	SPS2
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC115458 sequence for NM_012248 edited (data generated by NextGen Sequencing)

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ATGGCGGAAGCCTCGGCGACGGGCGCCTCGGAGAGGCGATGGCAGCGGCGGAAGGCTCC
TCGGGCCCGGCGGCTTACTCTGGGCCGAGCTTCTCGAACTACCGGCCCTTCGAGCCC
CAGGCGTTGGGCCTCAGCCCGAGCTGGCGGCTGACGGGCTTCTCCGGCATGAAGGCTGA
GGCTGCAAGGTCCCGCAGGAGGCGCTGCTCAAACCTCTGGCGGGACTGACGCGGCCGGAC
GTGCGGCCCGCTGGGCCGGGGCTGGTGGGTGGCCAGGAAGAGGCGTCCCAGGAAGCC
GGCCTGCCGCGCAGGAGCGGGCCCCAGCCCCACCTTCCAGCCCTGGGCATCGGGATGGAC
TCCTGCGTCATCCCCCTGAGGCACGGGGGCTGTCACTGGTGCAGACCACGGACTTCTTT
TACCCCTTGGTAGAAGATCCCTACATGATGGGGCGCATAGCTTGTGCCAACGTGCTGAGT
GACCTCTACGCCATGGGATTAAGTGTGACAACATGTTGATGTTACTCAGCGTCAGC
CAGAGTATGAGTGAGGAGGAACGCGAAAAGGTAACGCCACTCATGGTCAAAGGCTTTCGG
GATGCGGCTGAGGAAGGAGGGACGGCAGTGACCGGTGGGCAAACGGTGGTCAACCCTTGG
ATTATAATCGGTGGAGTTGCCACTGTAGTATGCCAACCATAAGTTCATAATGCCGGAC
AGCGCCGTCGTTGGGACGTGCTGGTGTAAACCAACCCTTAGGAACCCAGGTTGCTGTC
AATGCCACCAATGGCTGGATAATCCTGAAAGATGGAATAAAGTAAAGATGGTGGTCTCC
AGAGAAGAGGTGGAGCTGGCCTATCAGGAAGCCATGTTCAATATGGCTACCCTCAACAGA
ACTGCTGCAGGTTAATGCACACATTTAATGCCATGCGGCCACAGATATCACAGGCTTT
GGCATTCTAGGACTCCAGAACCTTGCAAAACAACAAAGAAATGAAGTGCCTTTGTT
ATTCATAATCTGCAATAATTGCAAGATGGCTGCCGTCAGCAAGGCCAGTGGACGGTTT
GGGCTTCTTCAAGGAACCTCAGCTGAAACCTCTGGGGGATTACTGATTTGTCTGCCAAGA
GAACAGGCGGCTCGCTTTTGTCTGAAATCAAATCCTCCAAGTACGGAGAGGGTCAACAA
GCGTGGATCGTTGGCATTGTGAAAAGGGAAACCGAACGGCCCGGATCATTGACAAGCCG
CGATTTATTGAAGTCTGCTCGTGGGGCCACAGCTGCTGTTCTTGTCTCTGACAGTTCA
AATGCCTCCTCTGAGCCTAGCTCGTGA

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Clone variation with respect to NM_012248.2



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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_012248 unedited
 AATTTGGTAAACGACTTCACTATAGGGCGGCCGGAATTCGCACGAGGTGACGGCTTGAG
 TAGCGCTAGGGGAGAAATCCCTGCAGGTAATTTGACTTTTGCTTCATATTAATCTGAGTG
 GAAAATAAAAGGGCCCTTCTCCTCTCGCTTCCCTGCCGGGCAGGCGCCATGGCGGAAG
 CCTCGGCGACGGGCGCCTGCGGAGAGGCGATGGCAGCGGCGGAAGGCTCCTCGGGCCCGG
 CGGGCTTGACTCTGGGCCGGAGCTTCTCGAACTACCGGCCCTTCGAGCCCAGGCGTTGG
 GCCTCAGCCCCGAGCTGGCGGCTGACGGGCTTCTCCGGCATGAAGGGCTGAGGCTGCAAGG
 TCCCGCAGGAGGCGCTGCTCAAACCTCCTGGCGGACTGACGCGGCGGAGGTGCGGCCCC
 CGCTGGGCCGGGGCCTGGTGGGTGGCCAGGAAGAGGCGTCCCAGGAAGCCGGCCTGCCGG
 CAGGAGCGGGCCCGACCCACCTTTCCAGCCCTGGGCATCGGGATGGACTCCTGCGTCA
 TCCCCCTGAGGCACGGGGCCTGTCACTGGTGCAGACCACGGACTTCTTTTACCCCTTGG
 TAGAAGATCCCTACATGATGGGGCGCATAGCTTGTCCAACGTGCTGAGTGACCTCTACG
 CCATGGGGATTACTGAGTGTGACAACATGTTGATGTTACTCAGCGTCAGCCAGAGTATGA
 GTGAGGAGGAACGCGAAAAGTAACGCCACTCATGGTCAAAGGCTNTCGGAATGCGGCTGA
 NGAAGAGGNACGGCAGTGACCGGTGGGCCAACGGTGGTCAACCCTGGATTATAATCGGT
 GGAGTTGCCACTGTAGTATGCCAACCAAATGAGTNCATAATGCCGNACAGCGCCCTCGTT
 GGGGACCTGCCTGGGTAAACCAACCGTAAGGACCCACGTTGCTGTTTCATGCCCAACAT
 GGCTGAAATCCTGGAGNAGGATAAG

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_012248 unedited
 TAGCTATGGACCCGCGGCCGAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTTTTTTTTTT
 TTTTATGTTTTCAACAAGGTTTCTTTATTTATTTAGCAAGAAATTAATCTTTATTGAT
 CAAATCACCAGGAATCTGCCGAAAAGACTTAACATCTTAATGACCACTGAGGCCTGGGC
 TCTGAGGCTTGCTCGCTCTCCAGTCTTAATGGGGTTTAGAGGGAGAGACGTCATTA
 ACAGAGACCAAGTCAGATGGTTGCAGGTCTCCTTTCCAGTCATCAGACAAGTTGCTCA
 ATTCTTGCCAGAGCAGGAAAGAGCCAGTACTTCAAGTAAATGAATAAAGAATTTGATG
 TTGCATTATAAGATCTCTCTTAACAATTTAAATTTATCAACAATATTGGTCCAAAATCA
 TTTGCTTCTAATTTTTTTCATTTTGAATTTACTTTGGGTGTGTGTTACTTTAATAATCT
 CACTCCCTGTGCAGAAATTAATCAACCCCGTCAAAGAAAAATCCCTCAACCTGGAATAG
 CTTTCTTACTTTGGCAAGAGAAAACAGAGGTATTTTGTCTCTTCTACCCAAGTGA
 TGAACAAATATCCCCCAAAGTTCAAAATGTTACTCTGGCCTCGGAATGCATATAAAGAC
 TGCTTTAGATGGGCTGATTCCAATCACCTAGAAAGGGCAGCCGGAACCACTATGCAGGCA
 GCCTTCTTTGAAATTTCTTACATCAACTTTGAGACCATCCGTGATTGTGGACAATGGC
 TCTAGGTTCAAACAACCTTCTGTTCTTTCATCTCACGAGCTAGGCTCAGAAGAAGCATTTT
 GACTGTGAGGAGCAAGAACAGCAGCTGTGGGCCACGAGCCAGGACTTCCATACTCGCGG
 CTTGCAATGATCCGGCCCGTCCGTTCCCTTTTCACATGCCACGATCACG

Restriction Sites:

NotI-NotI

ACCN:

NM_012248

Insert Size:

2240 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.

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:	<ol style="list-style-type: none">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:	<u>NM_012248.2</u> , <u>NP_036380.2</u>
RefSeq Size:	2291 bp
Locus ID:	22928
UniProt ID:	<u>Q99611</u>
Cytogenetics:	16p11.2
Domains:	AIRS
Protein Pathways:	Metabolic pathways, Selenoamino acid metabolism
Gene Summary:	This gene encodes an enzyme that catalyzes the production of monoselenophosphate (MSP) from selenide and ATP. MSP is the selenium donor required for synthesis of selenocysteine (Sec), which is co-translationally incorporated into selenoproteins at in-frame UGA codons that normally signal translation termination. The 3' UTRs of selenoprotein mRNAs contain a conserved stem-loop structure, the Sec insertion sequence (SECIS) element, which is necessary for the recognition of UGA as a Sec codon rather than as a stop signal. This protein is itself a selenoprotein containing a Sec residue at its active site, suggesting the existence of an autoregulatory mechanism. It is preferentially expressed in tissues implicated in the synthesis of selenoproteins and in sites of blood cell development. A pseudogene for this locus has been identified on chromosome 5. [provided by RefSeq, May 2017]