

Product datasheet for SC335498

SHMT1 (NM_001281786) Human Untagged Clone

Product data:

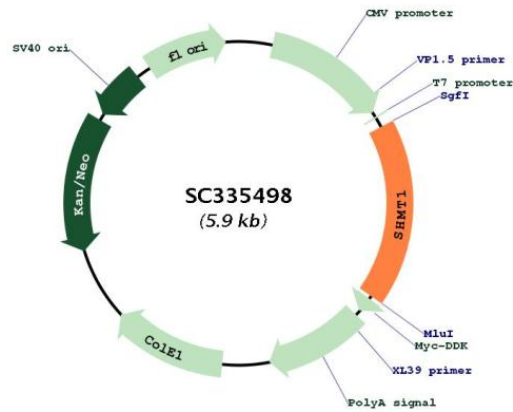
Product Type:	Expression Plasmids
Product Name:	SHMT1 (NM_001281786) Human Untagged Clone
Tag:	Tag Free
Symbol:	SHMT1
Synonyms:	CSHMT; SHMT
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC335498 representing NM_001281786. Blue=Insert sequence Red=Cloning site Green=Tag(s)

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GCTCGTTT TAGTGAACCGTCAGAATTTTGT AATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCC GCGATCGCC
ATGGGCCTGGACCTTCCGGATGGGGCCACCTGACCCATGGGTTCATGACAGACAAGAAGAAAATCTCT
GCCACGTCCATCTTCTTTGAATCTATGCCCTACAAGGTGAACCCAGATACTGGCTACATCAACTATGAC
CAGCTGGAGGAGAACGCACGCCTCTTCCACCCGAAGCTGATCATCGCAGGAACCAGCTGCTACTCCCGA
AACCTGGAATATGCCCGGCTACGGAAGATTGCAGATGAGAACGGGGCGTATCTCATGGCGGACATGGCT
CACATCAGCGGGCTGGTGGCGGCTGGCGTGGTGCCTCCCATTTGAACACTGCCATGTGGTGACCACC
ACCACTACAAGACCCTGCGAGGCTGCCGAGCTGGCATGATCTTCTACAGAAAGGAGTGAAAAGTGTG
GATCCCAAGACTGGCAAAGAGATTCTGTACAACCTGGAGTCTTATCAATTCTGCTGTGTCCCTGGC
CTGCAGGGAGGTCCCCACAACCACGCCATTGCTGGGGTTGCTGTGGCACTGAAGCAAGCTATGACTCTG
GAATTTAAAGTTTATCAACACCAAGTGGTGGCCAACCTGCAGGGCTCTGTCTGAGGCCCTGACGGAGCTG
GGCTACAAAATAGTCACAGGTGGTTCTGACAACCAATTTGATCCTTGTGGATCTCCGTTCCAAAGGCACA
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GACAGAAGCGCTCTGCGGCCAGTGGACTGCGGCTGGGGACCCAGCACTGACGTCCCCTGGACTTTTG
GAAAAAGACTTCCAAAAGTAGCCCACTTTATTCACAGAGGGATAGAGCTGACCTGCAGATCCAGAGC
GACTGGTGTGAGAGCCACCCTGAAAGAGTTCAAGGAGAGACTGGCAGGGGATAAGTACCAGGCCGCC
GTGCAGGCTCTCCGGGAGGAGTTGAGAGCTTCGCCTCTCTTCCCTCTGCCTGGCCTGCCTGACTTCT
TAA
ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
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Restriction Sites: SgfI-MluI



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Plasmid Map:


ACCN: NM_001281786

Insert Size: 1038 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).

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_001281786.1](#)

RefSeq Size: 2437 bp

RefSeq ORF: 1038 bp

Locus ID: 6470

UniProt ID: [P34896](#)

Cytogenetics: 17p11.2

Protein Pathways:	Cyanoamino acid metabolism, Glycine, serine and threonine metabolism, Metabolic pathways, Methane metabolism, One carbon pool by folate
MW:	37.7 kDa
Gene Summary:	<p>This gene encodes the cytosolic form of serine hydroxymethyltransferase, a pyridoxal phosphate-containing enzyme that catalyzes the reversible conversion of serine and tetrahydrofolate to glycine and 5,10-methylene tetrahydrofolate. This reaction provides one-carbon units for synthesis of methionine, thymidylate, and purines in the cytoplasm. This gene is located within the Smith-Magenis syndrome region on chromosome 17. A pseudogene of this gene is located on the short arm of chromosome 1. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Aug 2013]</p> <p>Transcript Variant: This variant (3) uses an alternate 5' exon structure, and thus differs in the 5' UTR and 5' coding region, compared to variant 1. These differences cause translation initiation at a downstream AUG and result in an isoform (3) with a shorter N-terminus, compared to isoform 1.</p>