

## Product datasheet for **RC237604**

### SHMT1 (NM\_001281786) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** SHMT1 (NM\_001281786) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** SHMT1  
**Synonyms:** CSHMT; SHMT  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**ORF Nucleotide Sequence:** >RC237604 representing NM\_001281786  
**Red=Cloning site Blue=ORF Green=Tags(s)**

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGGGCCTGGACCTTCCGGATGGGGCCACCTGACCCATGGGTTTCATGACAGACAAGAAGAAAATCTCTG  
CCACGTCCATCTTCTTTGAATCTATGCCCTACAAGGTGAACCCAGATACTGGCTACATCAACTATGACCA  
GCTGGAGGAGAACGCACGCCTCTCCACCCGAAGCTGATCATCGCAGGAACCAGCTGCTACTCCCGAAAC  
CTGGAATATGCCCGGCTACGGAAGATTGCAGATGAGAACGGGGCTATCTCATGGCGGACATGGCTCACA  
TCAGCGGGCTGGTGGCGGCTGGCGTGGTCCCTCCCATTTGAACACTGCCATGTGGTGACCACCACCAC  
TCACAAGACCCTGCGAGGCTGCCGAGCTGGCATGATCTTCTACAGGAAAGGAGTGAAGGTGGATCCC  
AAGACTGGCAAAGAGATTCTGTACAACCTGGAGTCTTTATCAATTCTGCTGTGTTCCCTGGCCTGCAGG  
GAGGTCCCACAACCACGCCATTGCTGGGGTGTGTGGCACTGAAGCAAGCTATGACTCTGGAATTTAA  
AGTTTATCAACACCAGGTGGTGGCAACTGCAGGGCTCTGTCTGAGGCCCTGACGGAGCTGGGCTACAAA  
ATAGTCACAGGTGGTCTGACAACCTTTGATCCTTGTGGATCTCCGTTCAAAGGCACAGATGGTGGAA  
GGGTGAGAAGGTGCTAGAAGCCTGTTCTATTGCCTGCAACAAGAACACTGTCCAGGTGACAGAAGCCG  
TCTGCGGCCAGTGGACTGCGGCTGGGGACCCAGCACTGACGTCCCGTGGACTTTTGGAAAAAGACTTC  
CAAAAAGTAGCCCACTTTATTACAGAGGGATAGAGCTGACCCTGCAGATCCAGAGCGACTGGTGTCA  
GAGCCACCCTGAAAGAGTTCAAGGAGAGACTGGCAGGGGATAAGTACCAGGCGGCCGTGCAGGCTCTCCG  
GGAGGAGTTGAGAGCTTCGCTCTCTTCCCTCTGCCTGGCCTGCCTGACTTC

**ACGGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<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_001281786.1</a> , <a href="#">NP_001268715.1</a>
<b>RefSeq Size:</b>	2437 bp
<b>RefSeq ORF:</b>	1038 bp
<b>Locus ID:</b>	6470
<b>UniProt ID:</b>	<a href="#">P34896</a>
<b>Cytogenetics:</b>	17p11.2
<b>Protein Pathways:</b>	Cyanoamino acid metabolism, Glycine, serine and threonine metabolism, Metabolic pathways, Methane metabolism, One carbon pool by folate
<b>MW:</b>	38.1 kDa
<b>Gene Summary:</b>	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]