

Product datasheet for **RG205102**

SHMT1 (NM_148918) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SHMT1 (NM_148918) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	SHMT1
Synonyms:	CSHMT; SHMT
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RG205102 representing NM_148918
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGACGATGCCAGTCAACGGGGCCACAAGGATGCTGACCTGTGGTCCTCACATGACAAGATGCTGGCAC
 AACCCCTCAAAGACAGTGATGTTGAGGTTTACAACATCATTAAAGAAGGAGAGTAACCGGCAGAGGTTGG
 ATTGGAGCTGATTGCCTCGGAGAATTTCCGCAGCCGAGCAGTTTTGGAGGCCCTAGGCTCTTGCTTAAAT
 AACAAATACTCTGAGGGTACCCGGGCCAGAGATACTATGGCGGGACTGAGTTTATTGATGAACTGGAGA
 CCCTCTGTGAGAAGCGAGCCCTGCAGGCCATAAGCTGGACCCACAGTGTGGGGGTCAACGTCCAGCC
 CTACTCAGGCTCCCCTGCAAACCTTGTGTGTACACTGCCCTGGTGAACCCCATGGGCGCATATGGGC
 CTGGACCTTCCGGATGGGGGCCACCTGACCCATGGGTTTCATGACAGACAAGAAGAAAATCTCTGCCACGT
 CCATCTTCTTTGAATCTATGCCCTACAAGGTGAACCCAGATACTGGCTACATCAACTATGACCAGCTGGA
 GGAGAACGCACGCCTCTCCACCCGAAGCTGATCATCGCAGGAACAGCTGCTACTCCCGAAACCTGGAA
 TATGCCCGGCTACGGAAGATTGCAGATGAGAACGGGGCGTATCTCATGGCGGACATGGCTCACATCAGCG
 GGCTGGTGGCGGCTGGCGTGGTGCCTCCCAATTTGAACACTGCCATGTGGTGACCACCACCACTACAA
 GACCTGCGAGGCTGCCGAGCTGGCATGATCTTACAGGAAAGGGGTTGCTGTGGCACTGAAGCAAGCT
 ATGACTCTGGAATTTAAAGTTTACAACACCAGGTGGTGGCAACTGCAGGGCTCTGTCTGAGGCCCTGA
 CGGAGCTGGGCTACAAAATAGTCACAGGTGGTCTGACAACCAATTTGATCCTTGTGGATCCTCGTTCCAA
 AGGCACAGATGGTGAAGGGCTGAGAAGGTGCTAGAAGCCTGTTCTATTGCTGCAACAAGAACACCTGT
 CCAGGTGACAGAAGCGCTCTGCGGCCAGTGGACTGCGGCTGGGACCCAGCACTGACGTCCCGTGGCA
 TTTTGGAAAAAGACTTCCAAAAAGTAGCCCACTTTATTCACAGAGGGATAGAGCTGACCTGCAGATCCA
 GAGCGCACTGGTGTGAGAGCCACCCTGAAAGAGTTCAAGGAGAGACTGGCAGGGGATAAGTACCGGCG
 GCCGTGCAGGCTCTCCGGAGGAGGTTGAGAGCTTCGCCTCTCTCTCCCTCTGCCTGGCCTGCCTGACT
 TC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

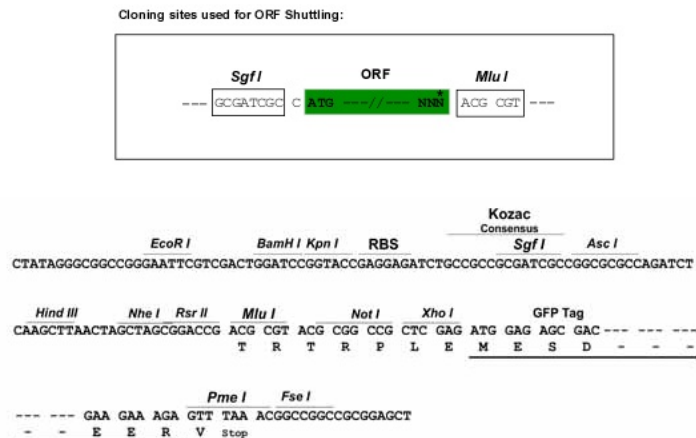
>RG205102 representing NM_148918
 Red=Cloning site Green=Tags(s)

MTMPVNGAHKADLWSSHDKMLAQPLKDSVVEVYNIKKESNRQRVGLELIASENFASRAVLEALGSCLN
 NKYSEGYPGQRYYGTEFIDELETLCQKRALQAYKLDPQCWGVNVQPYSGSPANFAVYALVEPHGRIMG
 LDLPDGGHLTHGFMTDKKISATSIFFESMPYKVNPDGYINYDQLEENARLFHPKLI IAGTSCYSRNLE
 YARLRKIADENGAYLMADMAHISGLVAAGVVPSPFEHCHVVTTHKTLRGCRAGMIFYRKGVAVALKQA
 MTLEFKVYQHVVANCRALSEALTELYKIVTGGSDNHLILVDLRSKGTGGRAEKVLEACSIACNKNTC
 PGDRSALRPSGLRLGTPALTSRGLLEKDFQKVAHF IHRGIELTLQIQSDTGVRATLKEFKERLAGDKYQA
 AVQALREEVESFASLFPLPGLPDF

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_148918

ORF Size: 1332 bp

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](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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_148918.2](#), [NP_683718.1](#)

RefSeq Size: 2423 bp

RefSeq ORF: 1335 bp

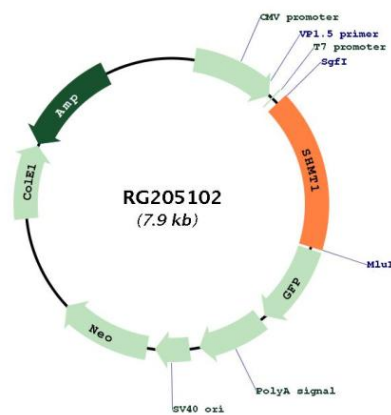
Locus ID: 6470

UniProt ID: [P34896](#)

Cytogenetics: 17p11.2

Domains:	SHMT
Protein Pathways:	Cyanoamino acid metabolism, Glycine, serine and threonine metabolism, Metabolic pathways, Methane metabolism, One carbon pool by folate
Gene Summary:	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]

Product images:



Circular map for RG205102