

Product datasheet for **RG237604**

SHMT1 (NM_001281786) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SHMT1 (NM_001281786) 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)
ORF Nucleotide Sequence:	>RG237604 representing NM_001281786. Blue=ORF Red=Cloning site Green=Tag(s)

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GCTCGTTTAGTGAACCGTCAGAATTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
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CAGCTGGAGGAGAACGCACGCCTCTCCACCCGAAGCTGATCATCGCAGGAACCAGCTGCTACTCCCGA
AACCTGGAATATGCCCGGCTACGGAAGATTGCAGATGAGAACGGGGCGTATCTCATGGCGGACATGGCT
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GACACTGGTGTGAGAGCCACCCTGAAAGAGTTCAAGGAGAGACTGGCAGGGGATAAGTACCAGGGCGCC
GTGCAGGCTCTCCGGGAGGAGTTGAGAGCTTCGCCTCTCTCTCCCTCTGCCTGGCCTGCCTGACTTC
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAAAC
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Protein Sequence: >Peptide sequence encoded by RG237604
 Blue=ORF Red=Cloning site Green=Tag(s)

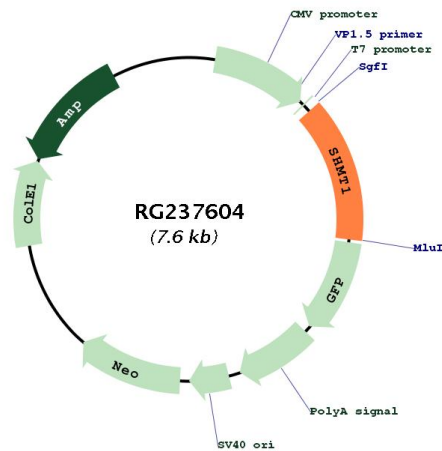
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 DPKTGEILYNLESLINSAVFPGLQGGPHNHAIGVAVALKQAMTLEFKVYQHVVANCRALSEALTEL
 GYKIVTGGSDNHLILVDLRSKGTDGGRAEKVLEACSIACNKNTCPGDRSALRPSGLRLGTPALTSRLL
 EKDFQKVAHF IHRGIELTLQIQSDTGVRATLKEFKERLAGDKYQAAVQALREEVESFASLFPLPGLPDF
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 MGYGFYHFGTYPSTYENPFLHAINNGGYNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPE
 SVIFTDKIIRSNATVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVD SHMHFKSAIHPSILQNGGPMFA
 FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001281786

ORF Size:	1035 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).
RefSeq:	NM_001281786.1 , NP_001268715.1
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:	38.1 kDa
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]