

Product datasheet for **MC202532**

Shmt2 (NM_028230) Mouse Untagged Clone

Product data:

| | |
|---------------------------|--|
| Product Type: | Expression Plasmids |
| Product Name: | Shmt2 (NM_028230) Mouse Untagged Clone |
| Tag: | Tag Free |
| Symbol: | Shmt2 |
| Synonyms: | 2700043D08Rik; AA408223; AA986903 |
| Mammalian Cell Selection: | Neomycin |
| Vector: | PCMV6-Kan/Neo (PCMV6KN) |
| E. coli Selection: | Kanamycin (25 ug/mL) |



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Fully Sequenced ORF: >BC004825 sequence for NM_028230
 GCGTTCTAAGAGCAGCTGGTTTTGACCCCGTACTACACCGATACAGAGTTAGTGGCTAGTCTCCTGT
 GCCTCCTGTAGCGATGGTATCCTTCTCTTTGCTTCGGACCACTCGGCCTCTGCAGAGATGTGGCCAGCTG
 GTCTGCATGGCTGCCCGGGCCAGCACAGCAAGGTGGCCAGACGAGGCTGGGAAGCAACTGGAGGTT
 GGACGGCCAGGAGAGTTATCAGACAGTGACCCTGAGATGTGGGAGCTTCTGCAGAGGGAGAAGGACAG
 ACAGTGTGCGGCCTGGAGCTCATCGCTCAGAGAACTTCTGCAGCCGAGCTGCGCTGGAGGCCCTGGGG
 TCCTGTCTCAACAACAAGTACTCGGAGGGTTACCCTGGCAAGAGATACTACGGAGGAGCGGAAGTGGTGG
 ACGAGATCGAGCTGCTCTGCCAGCGCCGGCCTTGAAGCCTTTGACCTGGATCCGGCACAGTGGGGAGT
 CAATGTGCAGCCATACTCAGGGTCCCCAGCCAATCTGGCTGCCTATACGGCCCTTCTGCAGCCTCATGAT
 CGAATCATGGGGTTGGACCTGCCCGATGGGGGCCATCTCACCCATGGCTACATGTCTGATGTCAAGCGGA
 TCTCCGCCACATCCATTTTCTTCGAGTCTATGCCCTATAAGCTCAATCCCCAACTGGCCTCATCGACTA
 CGACCAGCTGGCCTGACCGCTCGGCTTTTCCGACCGCGCTCATCATAGCTGGCACGAGTGCCTATGCC
 CGCCTCATTGACTATGCACGCATGAAAGAGGTCTGTGATGAGGTCAGGGCACACCTGCTGGCAGACATGG
 CCCACATCAGTGGCCTGGTGGCTGCCAAGGTGATCCCCTCCCCTTCAAGTACCGGATGTTGTTACCAC
 CACCCTCACAAGACACTGCGAGGGGCCAGGTCAGGGCTCATCTTCTACCGGAAGGGAGTACGAACCGTA
 GACCCCAAGACTGGCAAAGAGATCCCTTATACCTTTGAGGACCGAATCAACTTCGCTGTGTCCCATCCC
 TACAGGGTGGCCCCACAACCACGCCATTGCTGCAGTAGCCGTGGCTCTCAAGCAGGCCTGCACCCCTAT
 GTTCCGCGAGTACTCCTTACAAGTGTGAGGAACGCCAGGCCATGGCTGATGCCCTGCTCAAGCGAGGA
 TACTCGCTGGTGTCTGGTGGCACTGACACCCACCTGGTGTGGTGGACCTGCGGCCCAAGGGCCTGGATG
 GAGCCCGAGCCGAACCGCTGTTGGAAGTGTCTCCATCACAGCCAACAAGAACACCTGTCTGGAGACCG
 GAGCGCCATTACTCCGGGGGCTTGAGGCTTGGGGCCCCCGCTTACCTCTCGCCAGTTCGGTGGAGAC
 GACTTCCGTAGAGTCGTGATTTTATCGATGAGGGAGTCAACATTGGCTTGGAGGTGAAGCGCAAGACTC
 CCAAGCTCCAGGATTTCAAATCCTTCTGCTCAAAGACCCAGAGACAAGCCAGCGTTTGGCCAACCTCCG
 GCAACAGGTGGAACAGTTTGCCAGGGGCTTCCCGATGCCTGGATTTGATGAACGTTGAGGACAGTTGAGG
 ACACCTGGCGGTGCGTCAAGAAGCCACAGACCCGGAAGTTACCTTTCTCCCGCTCCCTGGACCATAGA
 AGAGATGTCACTCCTCTCTGGGTTTTAGTGGAGGGAGGGAGGCCCTCCATTTAGGGCAAGAGCCAGGCAT
 AAACCTCCCTCCAGAATTTGTAGCTGAGATTTCTGATCTTTAACCGTGTCTACACGAAGCACCCAGTTGA
 CATCCGACTTGTTTTTGAGACGGGGTCTCACTTAGCTGTGAGTGGCCTTGAAGTACCCTTCCACCTTC
 ATTTCCCAAGTGTGGGTTATAGGTTTGACCATGACACCCGACTTCGCCCTCAGCTTTCCACCCCGAC
 CCTCCCACTACATCTCAAGTGTACAGACTCCCCTCCCCTCTTTCTTGGGAAGAGGGGATGGGTAAGC
 GCCCTCCTCCTGTTTTATCTAATAAAATGCTAACCTGCAAAAAAAAAAAAAAAAAA

Restriction Sites: RsrII-NotI

ACCN: NM_028230

Insert Size: 1515 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: [BC004825](#), [AAH04825](#)

RefSeq Size: 2085 bp

RefSeq ORF: 1515 bp

Locus ID: 108037

UniProt ID: [Q9CZN7](#)

Cytogenetics: 10 D3

Gene Summary: Catalyzes the cleavage of serine to glycine accompanied with the production of 5,10-methylenetetrahydrofolate, an essential intermediate for purine biosynthesis (By similarity). Serine provides the major source of folate one-carbon in cells by catalyzing the transfer of one carbon from serine to tetrahydrofolate (By similarity). Contributes to the de novo mitochondrial thymidylate biosynthesis pathway via its role in glycine and tetrahydrofolate metabolism: thymidylate biosynthesis is required to prevent uracil accumulation in mtDNA (By similarity). Also required for mitochondrial translation by producing 5,10-methylenetetrahydrofolate; 5,10-methylenetetrahydrofolate providing methyl donors to produce the taurinomethyluridine base at the wobble position of some mitochondrial tRNAs (PubMed:29452640). Associates with mitochondrial DNA (By similarity). In addition to its role in mitochondria, also plays a role in the deubiquitination of target proteins as component of the BRISC complex: required for IFNAR1 deubiquitination by the BRISC complex (By similarity).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (1) represents the longer transcript and it encodes the longer protein (isoform 1).