

## 32-7706: Recombinant Human Serine Hydroxymethyltransferase Cytosolic/SHMT1 (C-6His)

**Gene :** SHMT1  
**Gene ID :** 6470  
**Uniprot ID :** P34896

### Description

Source: Human Cells.  
MW :53.9kD.

Recombinant Human SHMT1 is produced by our Mammalian expression system and the target gene encoding Met3-Phe483 is expressed with a 6His tag at the C-terminus. Serine Hydroxymethyltransferase Cytosolic (SHMT1) is a member of the SHMT family. SHMT1 is a cytoplasmic protein and exists as a homotetramer. SHMT1 catalyzes the reversible conversion of serine and tetrahydrofolate to glycine and 5,10-methylene tetrahydrofolate. This reaction provides one carbon unit for the synthesis of methionine, thymidylate, and purines in the cytoplasm. A reduction in SHMT1 levels would result in less glycine that could affect the nervous system by acting as an agonist to the NMDA receptor and this could be a mechanism behind Smith-Magenis syndrome.

### Product Info

**Amount :** 10 µg / 50 µg  
**Content :** Lyophilized from a 0.2 µm filtered solution of 20mM PB,150mM NaCl,pH7.4.  
Lyophilized protein should be stored at -20°C, though stable at room temperature for 3 weeks.  
**Storage condition :** Reconstituted protein solution can be stored at 4-7°C for 2-7 days. Aliquots of reconstituted samples are stable at -20°C for 3 months.  
**Amino Acid :** MPVNGAHKDADLWSSHDKMLAQPLKDSDEVYNIKKESNRQVRVGLLEIASENFASRAVLEALGSLNNKYSE  
GYPGQRYGGTEFIDELETLQCQRALQAYKLDPCQWGVNVQPYSGSPANFAVYTALVEPHGRIMGLDLPDGGH  
LTHGFMTDKKISATSIFFESMPYKVNPDGTGYINYDQLEENARLFHPKLIAGTSCYSRNLEYARLRKIADENGAYL  
MADMAHISGLVAAGVVPSPFEHCHVVTTHKTLRGCRAGMIFYRKGKVSVDPKTGKEILYNLESLINSAVFPGL  
QGGPHNHAIAGVAVALKQAMTLEFKVYQHVVANCRALSEALTELGKIVTGGSDNHLILVDLRSKGTGGRA  
EKVLEACSIACNKNTCPGDRSALRPSGLRLGTPALTSRGLLEKDFQKVAHFIHRGIELTLQIQSDTGVRATLKEFK  
ERLAGDKYQAAVQALREEVESFASFFPLPGLPDFVDHHHHHH

### Application Note

Always centrifuge tubes before opening. Do not mix by vortex or pipetting. It is not recommended to reconstitute to a concentration less than 100 µg/ml. Dissolve the lyophilized protein in ddH<sub>2</sub>O. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.

**Endotoxin :** Less than 0.1 ng/µg (1 IEU/µg) as determined by LAL test.