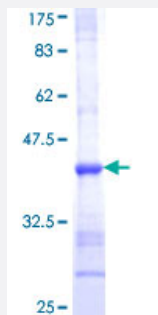


# SHMT1 (Human) Recombinant Protein (Q01)

Catalog # H00006470-Q01

Size 25 ug, 10 ug

## Applications



## Specification

|                                |                                                                                                                     |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------|
| <b>Product Description</b>     | Human SHMT1 partial ORF ( NP_004160, 374 a.a. - 482 a.a.) recombinant protein with GST-tag at N-terminal.           |
| <b>Sequence</b>                | EKVL EACSIACNKNTCPGDRSALRPSGLRLGTPALTSRGLLEKDFQKVAHFHARGIELTLQIQSDTG<br>VRATLKEFKERLAGDKYQAAVQALREEVESFASLFPLPLPLPD |
| <b>Host</b>                    | Wheat Germ (in vitro)                                                                                               |
| <b>Theoretical MW (kDa)</b>    | 37.73                                                                                                               |
| <b>Preparation Method</b>      | <a href="#">in vitro wheat germ expression system</a>                                                               |
| <b>Purification</b>            | Glutathione Sepharose 4 Fast Flow                                                                                   |
| <b>Quality Control Testing</b> | 12.5% SDS-PAGE Stained with Coomassie Blue.                                                                         |
| <b>Storage Buffer</b>          | 50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer.                                            |
| <b>Storage Instruction</b>     | Store at -80°C. Aliquot to avoid repeated freezing and thawing.                                                     |
| <b>Note</b>                    | Best use within three months from the date of receipt of this protein.                                              |

## Applications

- Enzyme-linked Immunoabsorbent Assay
- Western Blot (Recombinant protein)
- Antibody Production
- Protein Array

## Gene Info — SHMT1

Entrez GeneID [6470](#)

GeneBank Accession# [NM\\_004169](#)

Protein Accession# [NP\\_004160](#)

Gene Name SHMT1

Gene Alias CSHMT, MGC15229, MGC24556, SHMT

Gene Description serine hydroxymethyltransferase 1 (soluble)

Omim ID [182144](#)

Gene Ontology [Hyperlink](#)

**Gene Summary** This gene encodes the cellular 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. Alternative splicing of this gene results in 2 transcript variants encoding 2 different isoforms. Additional transcript variants have been described, but their biological validity has not been determined. [provided by RefSeq]

**Other Designations** 14 kDa protein|cytoplasmic serine hydroxymethyltransferase

## Pathway

- [Cyanoamino acid metabolism](#)
- [Glycine](#)
- [Metabolic pathways](#)

- [Methane metabolism](#)
- [One carbon pool by folate](#)

## Disease

- [Adenocarcinoma](#)
- [Adenoma](#)
- [Aortic Aneurysm](#)
- [Arthritis](#)
- [Atherosclerosis](#)
- [Autistic Disorder](#)
- [Bone Neoplasms](#)
- [Brain Ischemia](#)
- [Breast cancer](#)
- [Breast Neoplasms](#)
- [Carcinoma](#)
- [Cardiovascular Diseases](#)
- [Cleft Lip](#)
- [Cleft Palate](#)
- [Colorectal Neoplasms](#)
- [Disease Models](#)
- [Ductus Arteriosus](#)
- [Epilepsy](#)
- [Esophageal Neoplasms](#)
- [Folic Acid Deficiency](#)
- [Gastrointestinal Diseases](#)
- [Genetic Predisposition to Disease](#)

- [Head and Neck Neoplasms](#)
- [Heart Defects](#)
- [Hematologic Diseases](#)
- [Hyperhomocysteinemia](#)
- [Hypoplastic Left Heart Syndrome](#)
- [Infant](#)
- [Kidney Diseases](#)
- [Leukemia](#)
- [Lung Neoplasms](#)
- [Lymphoma](#)
- [Mental Disorders](#)
- [Microsatellite Instability](#)
- [Migraine Disorders](#)
- [Migraine with Aura](#)
- [Neoplasms](#)
- [Neural Tube Defects](#)
- [Osteosarcoma](#)
- [Ovarian cancer](#)
- [Ovarian Neoplasms](#)
- [Pregnancy Complications](#)
- [Premature Birth](#)
- [Prostate cancer](#)
- [Prostatic Neoplasms](#)
- [Schizophrenia](#)
- [Spinal Dysraphism](#)
- [Startle Reaction](#)

- [Stomach Neoplasms](#)
- [Stroke](#)
- [Urinary Bladder Neoplasms](#)
- [Vitamin B 12 Deficiency](#)
- [Werner syndrome](#)