

# Recombinant Human SHMT1 Protein (His Tag)

Catalog Number:PKSH033029



**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

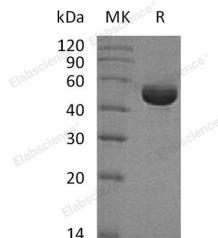
## Description

<b>Synonyms</b>	Serine Hydroxymethyltransferase Cytosolic;SHMT;Glycine Hydroxymethyltransferase;Serine Methylase;SHMT1
<b>Species</b>	Human
<b>Expression Host</b>	HEK293 Cells
<b>Sequence</b>	Met3-Phe483
<b>Accession</b>	AAH07979.1
<b>Calculated Molecular Weight</b>	53.9 kDa
<b>Observed molecular weight</b>	55 kDa
<b>Tag</b>	C-His

## Properties

<b>Purity</b>	> 95 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per $\mu$ g of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered solution of 20mM PB, 150mM NaCl, 1mM EDTA, 5% Trehalose, 5% Mannitol, 0.02% Tween80, pH 6.0. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer t
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

## Data



> 95 % as determined by reducing SDS-PAGE.

## Background

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.

## For Research Use Only

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