

Human SHMT1 antibody

Catalog Number: ATGA0413

PRODUCT INFORMATION

Catalog number

ATGA0413

Clone No.

AT26E5

Product type

Monoclonal Antibody

UnitProt No.

P34896

NCBI Accession No.

AAH07979

Alternative Names

Serine hydroxymethyltransferase 1, CSHMT, SHMT

PRODUCT SPECIFICATION

Antibody Host

Mouse

Reacts With

Human

Concentration

1mg/ml (determined by BCA assay)

Formulation

Liquid in. Phosphate-Buffered Saline (pH 7.4) with 0.02% Sodium Azide, 10% glycerol

Immunogen

Recombinant human SHMT1 (1-483aa) purified from E. coli

Isotype

IgG1 kappa

Purification Note

By protein-A affinity chromatography

Application

ELISA, WB, ICC/IF

Usage

The antibody has been tested by ELISA, Western blot and ICC/IF analysis to assure specificity and reactivity. Since application varies, however, each investigation should be titrated by the reagent to obtain optimal results.

Storage

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Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

Description

Serine hydroxymethyltransferase 1, also known as SHMT1, belongs to the SHMT family. This protein is 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. Also, SHMT1 preferentially supplies one-carbon units for thymidylate biosynthesis, depletes methylenetetrahydrofolate pools for S-adenosylmethionine (SAM) synthesis by synthesizing serine, sequesters 5-methyltetrahydrofolate and inhibits.

General References

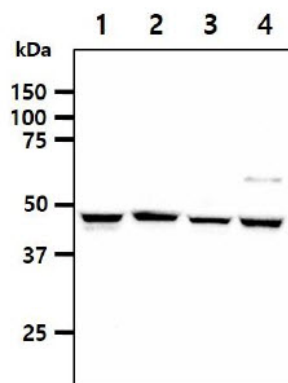
Garrow TA., et al. (1993) J Biol Chem. 268(16): 11910-6.

Perry C., et al. (2005) J Biol Chem. 280(1): 396-400.

Pinthong C., et al. (2014) FEBS J. 281(11): 2570-83.

DATA

Western blot analysis (WB)



The cell lysates (40ug) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human SHMT1 antibody (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.

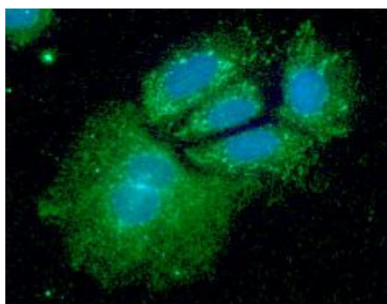
Lane 1.: A549 cell lysate

Lane 2.: HeLa cell lysate

Lane 3.: NIH-3T3 cell lysate

Lane 4.: LnCaP cell lysate

Immunocytochemistry/Immunofluorescence (ICC/IF)



ICC/IF analysis of SHMT1 in Hep3B cells. The cell was stained with ATGA0413 (1:100). The secondary antibody (green) was used Alexa Fluor 488. DAPI was stained the cell nucleus (blue).