

Rabbit SHMT1 Polyclonal Antibody | anti-SHMT1 antibody

Anti-SHMT1 Antibody

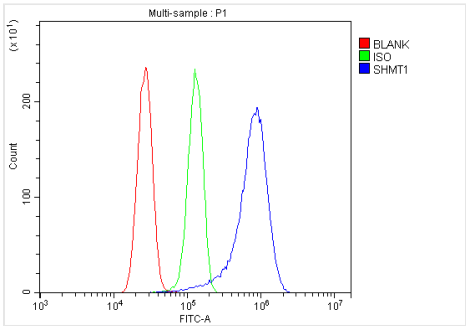
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA125680	Rabbit	Human, Mouse, Rat, Monkey	ELISA, Flow Cytometry, Functional Assay, Immunofluorescence, Immunocytochemistry, Western Blot

PRODUCT SYNONYMS

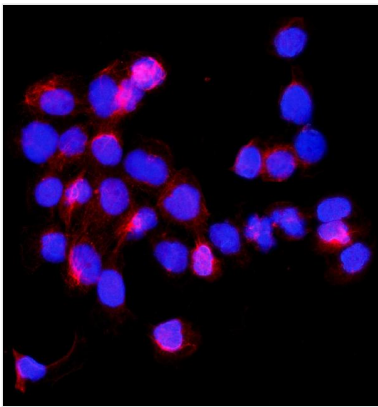
SHMT1; Polyclonal Antibody; Anti-SHMT1 Antibody; Serine hydroxymethyltransferase; cytosolic; SHMT; EC 2. 1. 2. 1; Glycine hydroxymethyltransferase; Serine methylase; serine hydroxymethyltransferase 1; anti-SHMT1 antibody

PRODUCT SPECIFICATIONS

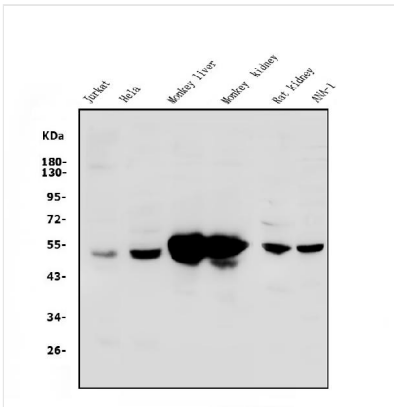
Host	Rabbit
Reactivity	Human, Mouse, Rat, Monkey
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Rabbit IgG polyclonal antibody for SHMT1 detection.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg NaN3.
Applicable Applications for anti-SHMT1 antibody	ELISA (Direct ELISA), FCM/FACS (Flow Cytometry), IF (Immunofluorescence), ICC (Immunocytochemistry), WB (Western Blot)
Immunogen	E Coli-derived human SHMT1 recombinant protein (Position: M1-S470).
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Recommended Detection Systems
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



FCM/FACS (Flow Cytometry)
Figure 3. Flow Cytometry analysis of U87 cells using anti-SHMT1 antibody (AAA125680).Overlay histogram showing U87 cells stained with AAA125680 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-SHMT1 Antibody (AAA125680,1μg/1x10⁶ cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-rabbit IgG (5-10μg/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1μg/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



IF (Immunofluorescence)
Figure 2. IF analysis of SHMT1 using anti-SHMT1 antibody (AAA125680).SHMT1 was detected in immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5μg/mL rabbit anti-SHMT1 Antibody (AAA125680) overnight at 4 degree C. DyLight®594 Conjugated Goat Anti-Rabbit IgG (BA1142) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37 degree C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



WB (Western Blot)
Figure 1. Western blot analysis of SHMT1 using anti-SHMT1 antibody (AAA125680).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.Lane 1: human Jurkat whole cell lysatesLane 2: human HeLa whole cell lysatesLane 3: monkey liver tissue lysatesLane 4: monkey kidney tissue lysatesLane 5: rat kidney tissue lysatesLane 6: mouse ANA-1 whole cell lysates.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1. 5 hour at RT. The membrane was incubated with rabbit anti-SHMT1 antigen affinity purified polyclonal antibody (Catalog # AAA125680) at 0. 5 μg/mL overnight at 4 degree C, then washed with TBS-0. 1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1. 5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for SHMT1 at approximately 53KD. The expected band size for SHMT1 is at 53KD.

ADDITIONAL INFORMATION

Related Product Information for anti-SHMT1 antibody

This gene encodes the cytosolic 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. A pseudogene of this gene is located on the short arm of chromosome 1. Alternative splicing results in multiple transcript variants.

References	1. Byrne, P. C., Shipley, J. M., Chave, K. J., Sanders, P. G., Snell, K. Characterisation of a human serine hydroxymethyltransferase pseudogene and its localisation of 1p32. 3-33. Hum. Genet. 97: 340-344, 1996. 2. Elsea, S. H., Juyal, R. C., Jiralerspong, S., Finucane, B. M., Pandolfo, M., Greenberg, F., Baldini, A., Stover, P., Patel, P. I. Haploinsufficiency of cytosolic serine hydroxymethyltransferase in the Smith-Magenis syndrome. Am. J. Hum. Genet. 57: 1342-1350, 1995. 3. Garrow, T. A., Brenner, A. A., Whitehead, V. M., Chen, X. -N., Duncan, R. G., Korenberg, J. R., Shane, B. Cloning of human cDNAs encoding mitochondrial and cytosolic serine hydroxymethyltransferases and chromosomal localization. J. Biol. Chem. 268: 11910-11916, 1993.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	462184
NCBI GeneID	6470
UniProt Accession #	P34896; Q96HY0; Q9UMD1; Q9UMD2; B4DPM9; D3DXD0
Molecular Weight	483
NCBI Official Full Name	Serine hydroxymethyltransferase, cytosolic
NCBI Official Synonym Full Names	serine hydroxymethyltransferase 1 (soluble)
NCBI Official Symbol	SHMT1
NCBI Official Synonym Symbols	SHMT; CSHMT
NCBI Protein Information	serine hydroxymethyltransferase, cytosolic; serine methylase; glycine hydroxymethyltransferase; cytoplasmic serine hydroxymethyltransferase
UniProt Protein Name	Serine hydroxymethyltransferase, cytosolic
UniProt Gene Name	SHMT1
UniProt Synonym Gene Names	SHMT
UniProt Entry Name	GLYC_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.