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SHMT2 antibody - C-terminal region

Rabbit Polyclonal Antibody
Catalog # AI12656

Product Information

Application	WB, IHC
Primary Accession	P34897
Other Accession	NM_005412, NP_005403
Reactivity	Human, Mouse, Rat, Rabbit, Pig, Dog, Guinea Pig, Horse, Bovine
Predicted	Human, Mouse, Rat, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	55993

Additional Information

Gene ID	6472
Alias Symbol	GLYA, SHMT
Other Names	Serine hydroxymethyltransferase, mitochondrial, SHMT, 2.1.2.1, Glycine hydroxymethyltransferase, Serine methylase, SHMT2
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-SHMT2 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	SHMT2 antibody - C-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SHMT2 (HGNC:10852)
Function	Catalyzes the cleavage of serine to glycine accompanied with the production of 5,10-methylenetetrahydrofolate, an essential intermediate for purine biosynthesis (PubMed:24075985, PubMed:25619277, PubMed:29364879, PubMed:33015733). Serine provides the major source of folate one-carbon in cells by catalyzing the transfer of one carbon from serine to tetrahydrofolate (PubMed:25619277). Contributes to the de novo mitochondrial thymidylate biosynthesis pathway via its role in glycine and tetrahydrofolate metabolism: thymidylate biosynthesis is required to prevent uracil accumulation in mtDNA (PubMed:21876188). Also required for mitochondrial translation by producing 5,10- methylenetetrahydrofolate; 5,10-methylenetetrahydrofolate providing

methyl donors to produce the taurinomethyluridine base at the wobble position of some mitochondrial tRNAs (PubMed:29364879, PubMed:29452640). Associates with mitochondrial DNA (PubMed:18063578). In addition to its role in mitochondria, also plays a role in the deubiquitination of target proteins as component of the BRISC complex: required for IFNAR1 deubiquitination by the BRISC complex (PubMed:24075985).

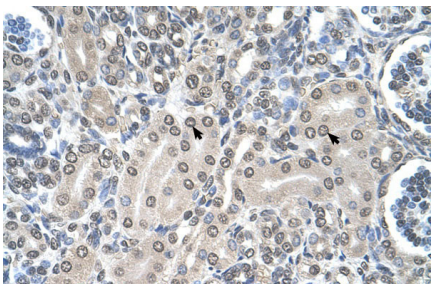
Cellular Location

Mitochondrion. Mitochondrion matrix, mitochondrion nucleoid. Mitochondrion inner membrane. Cytoplasm Nucleus. Note=Mainly localizes in the mitochondrion. Also found in the cytoplasm and nucleus as part of the BRISC complex (PubMed:24075985).

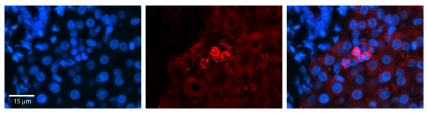
References

Fu,T.F.,(2001)Arch.Biochem.Biophys.393(1),42-50ReconstitutionandStorage:Forshorttermuse,storeat2-8Cupto1week.Forlongtermstorage,storeat-20Cinsmallaliquotstopreventfreeze-thawcycles.

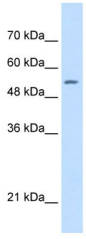
Images



Human kidney



SHMT2 antibody - C-terminal region
Formalin Fixed Paraffin Embedded Tissue: Human Liver
Tissue Observed Staining: Cytoplasm in Kupffer cells
Primary Antibody
Concentration: 1:600
Secondary Antibody: Donkey anti-Rabbit-Cy3
Secondary Antibody
Concentration: 1:200
Magnification: 20X
Exposure Time: 0.5 - 2.0 sec



WB Suggested Anti-SHMT2 Antibody Titration: 0.5µg/ml
Positive Control: HepG2 cell lysate

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.