#12762 Store at -20°C

SHMT2 Antibody

☑ 100 µl
(10 western blots)

Cell Signaling TECHNOLOGY®

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New 07/13

For Research Use Only. Not For Use In Diagnostic Procedures.

Entrez Gene ID #6472
UniProt ID #P34897

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, M, R, Mk	52 kDa	Rabbit**

Background: Serine hydroxymethyltransferases 1 and 2 (SHMT1, SHMT2) are cytoplasmic and mitochondrial serine hydroxylmethyltransferases, respectively (1,2). They catalyze the conversion of serine to glycine with the transfer of β-carbon from serine to tetrahydrofolate (THF) to form 5, 10-methylene-THF (1, 2). Research studies indicate that SHMT1 hemizygosity is associated with higher risk of intestinal cancer in mice of a certain genetic background (3). Suppression of SHMT2 was shown to block cell proliferation (4).

Specificity/Sensitivity: SHMT2 Antibody recognizes endogenous levels of total SHMT2 protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Phe441 of human SHMT2 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

(1) MacFarlane, A.J. et al. (2008) *J Biol Chem* 283, 25846-53.

(2) Hebbring, S.J. et al. (2012) *J Neurochem* 120, 881-90.

(3) Macfarlane, A.J. et al. (2011) *Cancer Res* 71, 2098-107.

(4) di Salvo, M.L. et al. (2013) *Med Hypotheses* 80, 633-6.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

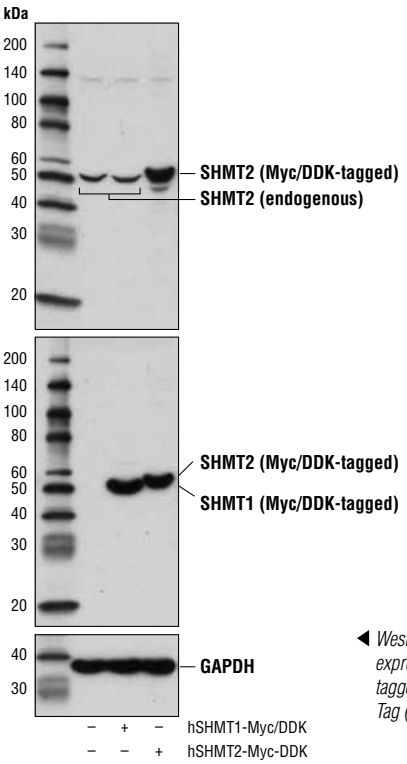
****Anti-rabbit secondary antibodies must be used to detect this antibody.**

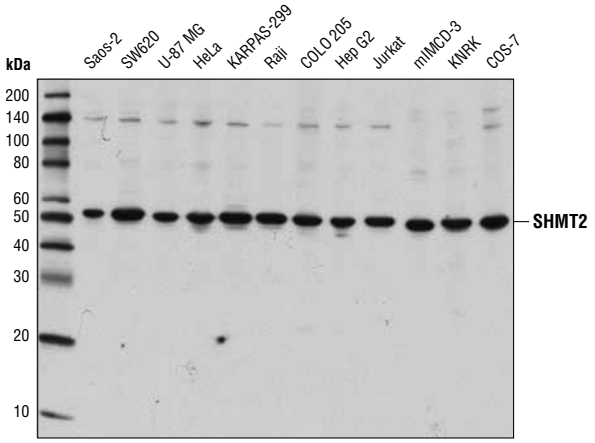
Recommended Antibody Dilutions:

Western blotting	1:1000

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended complementary products.





Western blot analysis of extracts from various cell lines using SHMT2 Antibody.

◀ *Western blot analysis of extracts from 293 cells, mock transfected (-) or transfected with a construct expressing either Myc/DDK-tagged full-length human SHMT1 (hSHMT1-Myc/DDK; +) or Myc/DDK-tagged full-length human SHMT2 (hSHMT2-Myc/DDK; +), using SHMT2 Antibody (upper), DYKDDDDK Tag (9A3) Mouse mAb #8146 (middle) or GAPDH (D16H11) XP® Rabbit mAb #5174 (lower).*

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.