

**SHMT2 (E7F4Q) Rabbit mAb**

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IHC-P	H M R Mk	Endogenous	52	Rabbit IgG	#P34897	6472

**Product Usage Information****Application**

Western Blotting  
Immunoprecipitation  
Immunohistochemistry (Paraffin)

**Dilution**

1:1000  
1:50  
1:200 - 1:800

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. *Do not aliquot the antibody.*

**Specificity/Sensitivity**

SHMT2 (E7F4Q) Rabbit mAb recognizes endogenous levels of total SHMT2 protein. This antibody does not cross-react with SHMT1 protein. Species cross-reactivity for IHC-P is human only.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly451 of human SHMT2 protein.

**Background**

Serine hydroxymethyltransferases 1 and 2 (SHMT1, SHMT2) are cytoplasmic and mitochondrial serine hydroxymethyltransferases, 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 hemizyosity 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).

**Background References**

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

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

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

**Applications Key**

**W:** Western Blotting **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin)

**Cross-Reactivity Key**

**H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey

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