

SHMT2 (E8O8J) Rabbit mAb

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Applications: IHC-P	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 52	Source/Isotype: Rabbit IgG	UniProt ID: #P34897	Entrez-Gene Id: 6472
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Product Usage Information**Application**

Immunohistochemistry (Paraffin)

Dilution

1:100 - 1:400

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 (E8O8J) Rabbit mAb recognizes endogenous levels of total SHMT2 protein. This antibody does not cross-react with SHMT1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val489 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).

Applications Key

IHC-P: Immunohistochemistry (Paraffin)

Cross-Reactivity Key

H: Human

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