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#14998

# MTHFD1L (D708E) Rabbit mAb

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UniProt ID #Q6UB35

New 04/15

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

Applications W, IP Endogenous	Species Cross-Reactivity* H	Molecular Wt. 106 kDa	Isotype Rabbit IgG**
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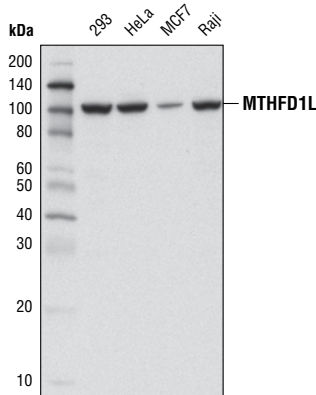
**Background:** NADP<sup>+</sup> dependent methylenetetrahydrofolate dehydrogenase 1-like (MTHFD1L) is a mitochondrial enzyme that catalyzes the production of formate from 10-formyl-tetrahydrofolate, the last step in one-carbon (1-C) flow from mitochondria to cytoplasm (1,2). These one-carbon end products are required for *de novo* synthesis of thymidylate and purines. In the mitochondria, these essential one-carbon products are formed by a series of reactions catalyzed by a pair of enzymes (MTHFD2 and MTHFD1L), but by the trifunctional MTHFD1 enzyme in the cytoplasm (3). The 10-formyl-tetrahydrofolate synthetase MTHFD1L is widely expressed in most adult tissues and at all stages of mammalian embryonic development (1). Research studies using MTHFD1L knockout mice indicate that MTHFD1L plays an essential role in neural tube formation; mice lacking MTHFD1L displayed neural tube and craniofacial defects leading to embryonic lethality (4).

**Specificity/Sensitivity:** MTHFD1L (D708E) Rabbit mAb recognizes endogenous levels of total MTHFD1L protein.

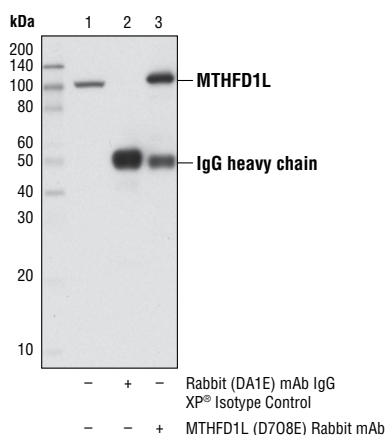
**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro52 of human MTHFD1L protein.

**Background References:**

- (1) Prasanna, P. et al. (2003) *J Biol Chem* 278, 43178-87.
- (2) Prasanna, P. and Appling, D.R. (2009) *Arch Biochem Biophys* 481, 86-93.
- (3) Pike, S.T. et al. (2010) *J Biol Chem* 285, 4612-20.
- (4) Momb, J. et al. (2013) *Proc Natl Acad Sci USA* 110, 549-54.



Western blot analysis of extracts from various cell lines using MTHFD1L (D708E) Rabbit mAb.



Immunoprecipitation of MTHFD1L from 293 cell extracts. Lane 1 is 10% input, lane 2 is Rabbit (DA1E) mAb IgG XP® Isotype Control #3900, and lane 3 is MTHFD1L (D708E) Rabbit mAb. Western blot analysis was performed using MTHFD1L (D708E) Rabbit mAb.

**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.

\*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  
Immunoprecipitation 1:200

For product specific protocols and a complete listing of recommended companion products please see the product web page at [www.cellsignal.com](http://www.cellsignal.com)

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**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.**

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: 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.