

#41377 Store at -20°C

**MTHFD2 (D8W9U) Rabbit mAb****Cell Signaling**  
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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H	Endogenous	35	Rabbit IgG	#P13995	10797

**Product Usage Information****Application**Western Blotting  
Immunoprecipitation**Dilution**1:1000  
1:50**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**

MTHFD2 (D8W9U) Rabbit mAb recognizes endogenous levels of total MTHFD2 protein.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu340 of human MTHFD2 protein.

**Background**

MTHFD2 is a bifunctional methylenetetrahydrofolate dehydrogenase/cyclohydrolase involved in mitochondrial folate metabolism (1). MTHFD2 expression is developmentally regulated, as it is expressed in embryos but not in most adult tissues. Recent research studies have shown that MTHFD2 is consistently overexpressed in many cancer types and correlated with poor survival in breast cancer (2-5). Overexpression of MTHFD2 promotes cell proliferation while its depletion induces cell death in human cancer cells (6).

**Background References**

1. Christensen, K.E. and Mackenzie, R.E. (2008) *Vitam Horm* 79, 393-410.
2. Lehtinen, L. et al. (2013) *Oncotarget* 4, 48-63.
3. Nilsson, R. et al. (2014) *Nat Commun* 5, 3128.
4. Liu, F. et al. (2014) *Tumour Biol* 35, 8685-90.
5. Tedeschi, P.M. et al. (2015) *Mol Cancer Res* 13, 1361-6.
6. Gustafsson Sheppard, N. et al. (2015) *Sci Rep* 5, 15029.

**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****WB:** Western Blotting **IP:** Immunoprecipitation**Cross-Reactivity Key**

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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