

**MTHFD1 Antibody (Center) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP2788c****Specification**

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**MTHFD1 Antibody (Center) Blocking Peptide - Product Information**Primary Accession  
Other Accession[P11586](#)  
[NP\\_005947](#)**MTHFD1 Antibody (Center) Blocking Peptide - Additional Information****Gene ID** 4522**Other Names**

C-1-tetrahydrofolate synthase, cytoplasmic, C1-THF synthase, Methylenetetrahydrofolate dehydrogenase, Methenyltetrahydrofolate cyclohydrolase, Formyltetrahydrofolate synthetase, C-1-tetrahydrofolate synthase, cytoplasmic, N-terminally processed, MTHFD1, MTHFC, MTHFD

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP2788c](/products/AP2788c) was selected from the Center region of human MTHFD1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**MTHFD1 Antibody (Center) Blocking Peptide - Protein Information****Name** MTHFD1**Synonyms** MTHFC, MTHFD**Function**

Trifunctional enzyme that catalyzes the interconversion of three forms of one-carbon-substituted tetrahydrofolate: (6R)-5,10- methylene-5,6,7,8-tetrahydrofolate, 5,10-methenyltetrahydrofolate and (6S)-10-formyltetrahydrofolate (PubMed: [1881876](http://www.uniprot.org/citations/1881876), PubMed: [10828945](http://www.uniprot.org/citations/10828945), PubMed: [18767138](http://www.uniprot.org/citations/18767138)). These derivatives of tetrahydrofolate are differentially required in nucleotide and amino acid biosynthesis, (6S)-10-formyltetrahydrofolate being required for

purine biosynthesis while (6R)-5,10-methylene-5,6,7,8-tetrahydrofolate is used for serine and methionine biosynthesis for instance (PubMed:<a href="http://www.uniprot.org/citations/25633902" target="\_blank">25633902</a>, PubMed:<a href="http://www.uniprot.org/citations/18767138" target="\_blank">18767138</a>).

**Cellular Location**

Cytoplasm.

**Tissue Location**

Ubiquitous.

**MTHFD1 Antibody (Center) Blocking Peptide - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

**MTHFD1 Antibody (Center) Blocking Peptide - Images****MTHFD1 Antibody (Center) Blocking Peptide - Background**

MTHFD1 is a protein that possesses three distinct enzymatic activities, 5,10-methylenetetrahydrofolate dehydrogenase, 5,10-methenyltetrahydrofolate cyclohydrolase and 10-formyltetrahydrofolate synthetase. Each of these activities catalyzes one of three sequential reactions in the interconversion of 1-carbon derivatives of tetrahydrofolate, which are substrates for methionine, thymidylate, and de novo purine syntheses. The trifunctional enzymatic activities are conferred by two major domains, an aminoterminal portion containing the dehydrogenase and cyclohydrolase activities and a larger synthetase domain.

**MTHFD1 Antibody (Center) Blocking Peptide - References**

Ivanov,A., J Am Diet Assoc 109 (2), 313-318 (2009)Schmidt A., Biochemistry 39:6325-6335(2000)Hol F.A., Clin. Genet. 53:119-125(1998)