

# MTHFD1 Antibody (Center P550) Blocking Peptide

Synthetic peptide Catalog # BP2788f

## **Specification**

# MTHFD1 Antibody (Center P550) Blocking Peptide - Product Information

Primary Accession P11586
Other Accession NP 005947

# MTHFD1 Antibody (Center P550) 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 <a href=/products/AP2788f>AP2788f</a> 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 P550) 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:<a href="http://www.uniprot.org/citations/1881876" target="\_blank">1881876</a>, PubMed:<a href="http://www.uniprot.org/citations/10828945" target="\_blank">10828945</a>, PubMed:<a href="http://www.uniprot.org/citations/18767138" target="\_blank">18767138</a>). 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 P550) Blocking Peptide - Protocols

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

## • Blocking Peptides

MTHFD1 Antibody (Center P550) Blocking Peptide - Images

# MTHFD1 Antibody (Center P550) 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 P550) 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)