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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 AP2788f 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:1881876, PubMed:10828945, PubMed: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:25633902, PubMed:18767138).

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)