

Goat Anti-MTHFD1 Antibody

Peptide-affinity purified goat antibody Catalog # AF1689a

Specification

Goat Anti-MTHFD1 Antibody - Product Information

Application WB
Primary Accession P11586

Other Accession <u>NP_005947</u>, <u>4522</u>, <u>108156 (mouse)</u>, <u>64300 (rat)</u>

Reactivity
Predicted
Host
Clonality
Concentration
Human
Mouse, Rat
Goat
Polyclonal
100ug/200ul

Isotype IgG
Calculated MW 101531

Goat Anti-MTHFD1 Antibody - Additional Information

Gene ID 4522

Other Names

C-1-tetrahydrofolate synthase, cytoplasmic, C1-THF synthase, Methylenetetrahydrofolate dehydrogenase, 1.5.1.5, Methenyltetrahydrofolate cyclohydrolase, 3.5.4.9, Formyltetrahydrofolate synthetase, 6.3.4.3, C-1-tetrahydrofolate synthase, cytoplasmic, N-terminally processed, MTHFD1, MTHFC, MTHFD

Format

0.5 mg lgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Goat Anti-MTHFD1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-MTHFD1 Antibody - 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.

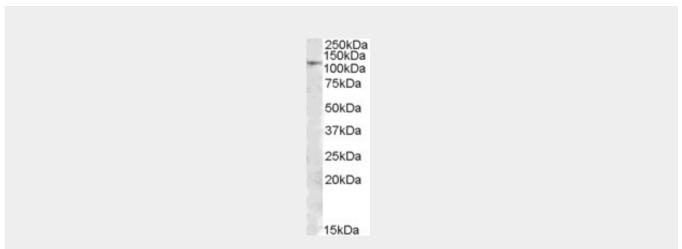
Tissue Location Ubiquitous.

Goat Anti-MTHFD1 Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Goat Anti-MTHFD1 Antibody - Images



AF1689a (1 μ g/ml) staining of Human Substantia Nigra lysate (35 μ g protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-MTHFD1 Antibody - Background

This gene encodes 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



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conferred by two major domains, an aminoterminal portion containing the dehydrogenase and cyclohydrolase activities and a larger synthetase domain.

Goat Anti-MTHFD1 Antibody - References

Genetic variants in one-carbon metabolism-related genes contribute to NSCLC prognosis in a Chinese population. Jin G, et al. Cancer, 2010 Aug 24. PMID 20737570.

Maternal genes and facial clefts in offspring: a comprehensive search for genetic associations in two population-based cleft studies from Scandinavia. Jugessur A, et al. PLoS One, 2010 Jul 9. PMID 20634891.

Variation at the NFATC2 Locus Increases the Risk of Thiazolinedinedione-Induced Edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) Study. Bailey SD, et al. Diabetes Care, 2010 Jul 13. PMID 20628086.

A candidate gene study of folate-associated one carbon metabolism genes and colorectal cancer risk. Levine AJ, et al. Cancer Epidemiol Biomarkers Prev, 2010 Jul. PMID 20615890.

Genetic variation in TYMS in the one-carbon transfer pathway is associated with ovarian carcinoma types in the Ovarian Cancer Association Consortium. Kelemen LE, et al. Cancer Epidemiol Biomarkers Prev, 2010 Jul. PMID 20570913.