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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	NP_005947, 4522, 108156 (mouse), 64300 (rat)
Reactivity	**Human**
Predicted	**Mouse, Rat**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**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 IgG/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
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Goat Anti-MTHFD1 Antibody - Images



AF1689a (1 µg/ml) staining of Human Substantia Nigra lysate (35 µg 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

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.