

For Research Use Only

MTHFR Monoclonal antibody

Catalog Number: 66612-1-Ig **3 Publications**



Basic Information

Catalog Number: 66612-1-Ig	GenBank Accession Number: BC053509	Purification Method: Protein A purification
Size: 1800 µg/ml	GeneID (NCBI): 4524	CloneNo.: 1F7A3
Source: Mouse	UNIPROT ID: P42898	Recommended Dilutions: WB 1:5000-1:50000 IHC 1:500-1:2000 IF 1:200-1:800
Isotype: IgG2b	Full Name: 5,10-methylenetetrahydrofolate reductase (NADPH)	
Immunogen Catalog Number: AG14970	Calculated MW: 656 aa, 75 kDa	
	Observed MW: 70 kDa	

Applications

Tested Applications: IF/ICC, IHC, WB, ELISA	Positive Controls: WB : LNCaP cells, HeLa cells, HepG2 cells, Jurkat cells IHC : human liver tissue, IF : HeLa cells,
Cited Applications: WB	
Species Specificity: Human	
Cited Species: human	
Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0	

Background Information

5,10-Methylenetetrahydrofolate reductase (MTHFR) is a crucial enzyme in the folate metabolic pathway with a key role in generating methyl groups. MTHFR reduces 5,10-methylenetetrahydrofolate (5,10-methyleneTHF) to 5-methylTHF, the primary carbon donor for methionine production from homocysteine. In humans and mice studies, mutations and polymorphisms in MTHFR are associated with impaired spermatogenesis and male infertility. It has been reported that MTHFR is highly phosphorylated under unperturbed conditions and T34 is the priming phosphorylation site. MTHFR gene has two promoters and isoform (70 kDa and 77 kDa). Although the major form of MTHFR is 77kDa in most tissues, a second isoform of 70kDa was observed after western blotting of human fetal liver and porcine liver. (PMID: 24769206, PMID: 34128976, PMID: 18615588)

Notable Publications

Author	Pubmed ID	Journal	Application
Li Cui	34533844	J Pineal Res	WB
Elodie Villa	33756106	Mol Cell	WB
Hongwei Chu	34932315	Anal Chem	WB

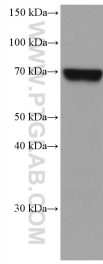
Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

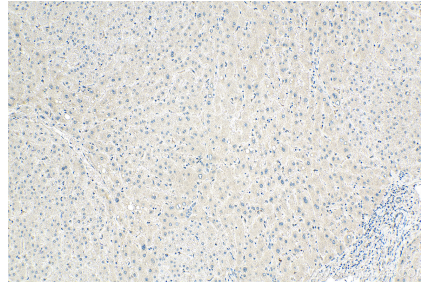
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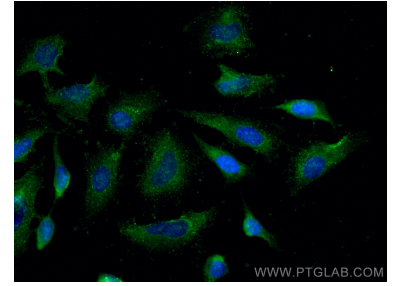
Selected Validation Data



LNCaP cells were subjected to SDS PAGE followed by western blot with 66612-1-Ig (MTHFR antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



Immunohistochemical analysis of paraffin-embedded human liver tissue slide using 66612-1-Ig (MTHFR antibody) at dilution of 1:1000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (-20°C Methanol) fixed HeLa cells using MTHFR antibody (66612-1-Ig, Clone: 1F7A3) at dilution of 1:400 and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L).