

For Research Use Only

# MTHFD2 Polyclonal antibody

Catalog Number: 12270-1-AP

Featured Product

46 Publications



## Basic Information

Catalog Number:

12270-1-AP

Concentration:

500 µg/ml

Source:

Rabbit

Isotype:

IgG

Immunogen Catalog Number:

AG2911

GenBank Accession Number:

BC017054

GeneID (NCBI):

10797

UNIPROT ID:

P13995

Full Name:

methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 2, methenyltetrahydrofolate cyclohydrolase

Calculated MW:

350 aa, 38 kDa

Observed MW:

33-38 kDa

Purification Method:

Antigen affinity purification

Recommended Dilutions:

WB 1:1000-1:8000

IP 0.5-4.0 µg for 1.0-3.0 mg of total protein lysate

IHC 1:200-1:800

IF/ICC 1:200-1:800

## Applications

Tested Applications:

WB, IHC, IF/ICC, IP, ELISA

Cited Applications:

WB, IHC, IF, IP, CoIP

Species Specificity:

human, mouse, rat

Cited Species:

human, mouse

Positive Controls:

WB : A549 cells, HEK-293T cells, Jurkat cells, mouse testis tissue, rat testis tissue, HCT 116 cells

IP : A549 cells, mouse testis tissue

IHC : human colon cancer tissue,

IF/ICC : HepG2 cells,

**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

Methylenetetrahydrofolate dehydrogenase 2 (MTHFD2) is a folate-coupled mitochondrial metabolic enzyme characterized by methylenetetrahydrofolate dehydrogenase and cyclohydrolase activity. It was demonstrated that suppression of MTHFD2 inhibits methylation reactions, decreases protein synthesis and disrupts redox homeostasis, which may ultimately result in significant changes in cellular metabolic phenotype. MTHFD2 is reported to be up-regulated in various tumours, such as lung adenocarcinoma (PMID: 34121323) and breast cancer (PMID: 34007312).

## Notable Publications

Author	Pubmed ID	Journal	Application
Francesc Baixauli	36171294	Nature	WB
Costas Koufaris	30275950	Cancer Metab	WB, CoIP
César Vázquez-Trincado	34550363	Hum Mol Genet	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

For technical support and original validation data for this product please contact:

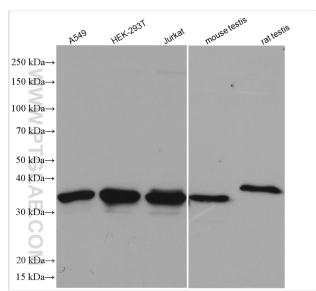
T: 4006900926

E: [Proteintech-CN@ptglab.com](mailto:Proteintech-CN@ptglab.com)

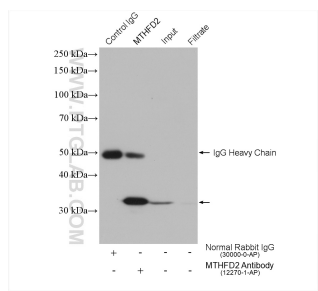
W: [ptgcn.com](http://ptgcn.com)

**This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.**

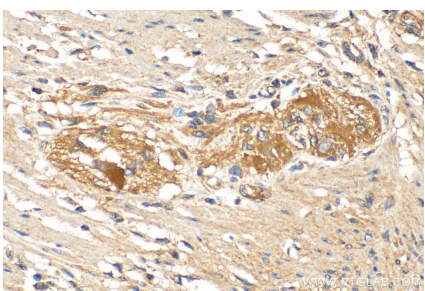
Selected Validation Data



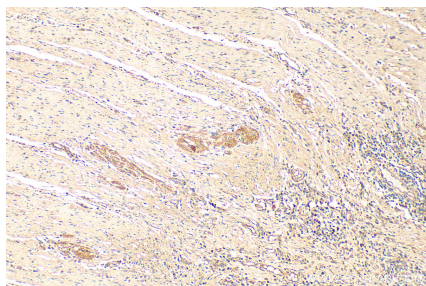
Various lysates were subjected to SDS PAGE followed by western blot with 12270-1-AP (MTHFD2 antibody) at dilution of 1:4000 incubated at room temperature for 1.5 hours.



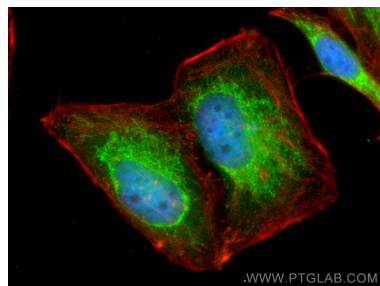
IP result of anti-MTHFD2 (IP:12270-1-AP, 4ug; Detection:12270-1-AP 1:4000) with A549 cells lysate 1480 ug.



Immunohistochemical analysis of paraffin-embedded human colon cancer tissue slide using 12270-1-AP (MTHFD2 antibody) at dilution of 1:400 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human colon cancer tissue slide using 12270-1-AP (MTHFD2 antibody) at dilution of 1:400 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using MTHFD2 antibody (12270-1-AP) at dilution of 1:400 and CoraLite® 488-Conjugated Goat Anti-Rabbit IgG(H+L), CL594-Phalloidin (red).