

For Research Use Only

# MTHFD2 Recombinant monoclonal antibody

Catalog Number: 86608-3-RR



## Basic Information

**Catalog Number:**

86608-3-RR

**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:**

Protein A purification

**CloneNo.:**

251431F2

**Recommended Dilutions:**

WB: 1:5000-1:50000

IF/ICC: 1:250-1:1000

FC (Intra): 0.25 ug per 10<sup>6</sup> cells in a 100 µl suspension

## Applications

**Tested Applications:**

WB, IF/ICC, FC (Intra), ELISA

**Species Specificity:**

human, mouse, rat

**Positive Controls:**

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

IF/ICC : HepG2 cells,

FC (Intra) : A549 cells,

## 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).

## Storage

**Storage:**

Store at -20°C. Stable for one year after shipment.

**Storage Buffer:**

PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

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

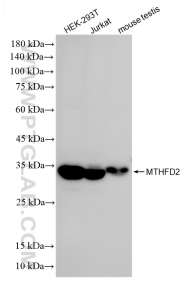
T: 4006900926

E: Proteintech-CN@ptglab.com

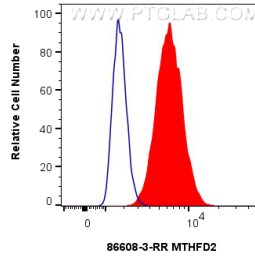
W: ptgcn.com

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

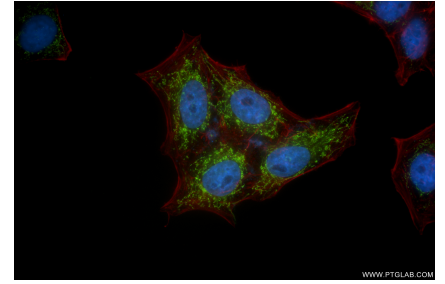
## Selected Validation Data



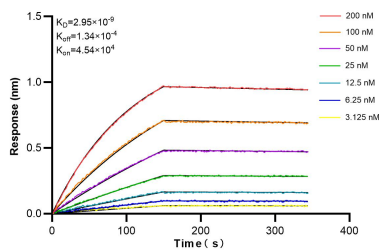
Various lysates were subjected to SDS PAGE followed by western blot with 86608-3-RR (MTHFD2 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



1x10<sup>6</sup> A549 cells were intracellularly stained with 0.25 ug MTHFD2 Recombinant monoclonal antibody (86608-3-RR, Clone:251431F2) and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2)(red), or 0.25 ug Isotype Control (blue). Cells were fixed and permeabilized with Intracellular Flow Cytometry Fixation & Permeabilization Buffer Kit (PF00019).



Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using MTHFD2 antibody (86608-3-RR, Clone: 251431F2) at dilution of 1:500 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2), CL594-Phalloidin (red).



Biolayer interferometry (BLI) kinetic assays of 86608-3-RR against Human MTHFD2 were performed. The affinity constant is 2.95 nM.