

For Research Use Only

mTOR Recombinant monoclonal antibody

Catalog Number: 81670-1-RR

Featured Product

1 Publications



Basic Information

Catalog Number:

81670-1-RR

Source:

Rabbit

Isotype:

IgG

Immunogen Catalog Number:

AG28395

GenBank Accession Number:

NM_004958

GeneID (NCBI):

2475

UNIPROT ID:

P42345

Full Name:

FK506 binding protein 12-rapamycin associated protein 1

Calculated MW:

289 kDa

Observed MW:

250-289 kDa

Purification Method:

Protein A purification

CloneNo.:

6H23

Recommended Dilutions:

WB: 1:1000-1:6000

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

IHC: 1:50-1:500

IF/ICC: 1:50-1:500

FC (Intra): 0.25 ug per 10⁶ cells in a 100 µl suspension

Applications

Tested Applications:

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

Cited Applications:

WB

Species Specificity:

human, mouse, rat

Cited Species:

mouse

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB : HeLa cells, HEK-293 cells, MCF-7 cells, HepG2 cells, Jurkat cells, NIH/3T3 cells, HSC-T6 cells

IP : HeLa cells,

IHC : human colon cancer tissue, mouse brain tissue

IF/ICC : HepG2 cells,

FC (Intra) : HeLa cells,

Background Information

mTOR, also named as FRAP1, FRAP, FRAP2 and RAPT1, belongs to the PI3/PI4-kinase family. mTOR is a Ser/Thr protein kinase that functions as an ATP and amino acid sensor to balance nutrient availability and cell growth. mTOR is kinase subunit of both mTORC1 and mTORC2, which regulate cell growth and survival in response to nutrient and hormonal signals. mTORC1 is activated in response to growth factors or amino-acids. mTORC2 is also activated by growth factors, but seems to be nutrient-insensitive. mTORC2 seems to function upstream of Rho GTPases to regulate the actin cytoskeleton, probably by activating one or more Rho-type guanine nucleotide exchange factors. mTORC2 promotes the serum-induced formation of stress-fibers or F-actin. mTOR is phosphorylated at Ser2448 via the PI3 kinase/Akt signaling pathway and autophosphorylated at Ser2481. mTOR plays a key role in cell growth and homeostasis and may be abnormally regulated in tumors.

Notable Publications

Author	Pubmed ID	Journal	Application
Chao Wang	39559790	Drug Des Devel Ther	WB

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:

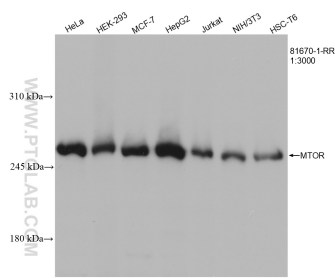
T: 4006900926

E: Proteintech-CN@ptglab.com

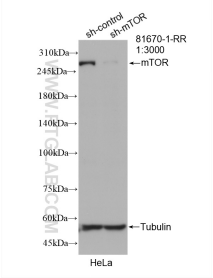
W: ptgcn.com

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

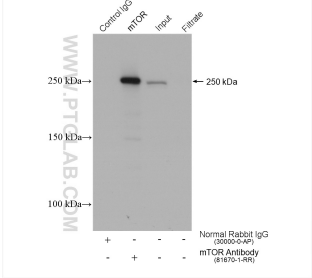
Selected Validation Data



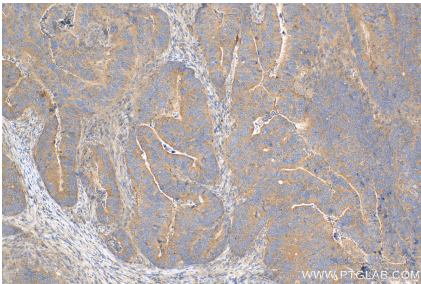
Various lysates were subjected to SDS PAGE followed by western blot with 81670-1-RR (mTOR antibody) at dilution of 1:3000 incubated at room temperature for 1.5 hours.



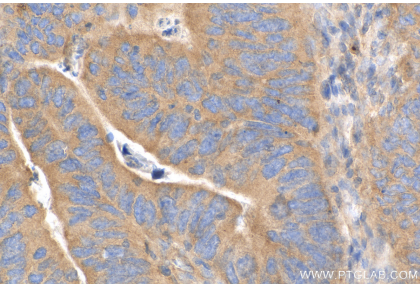
WB result of mTOR antibody (81670-1-RR; 1:3000; incubated at room temperature for 1.5 hours) with sh-Control and sh-mTOR transfected HeLa cells.



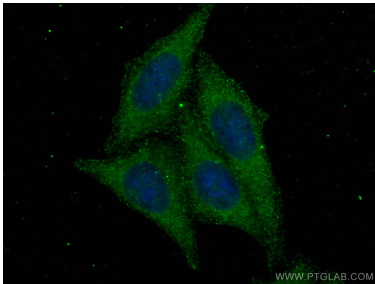
IP result of anti-mTOR (IP:81670-1-RR, 4ug; Detection:81670-1-RR 1:1000) with HeLa cells lysate 1760 ug.



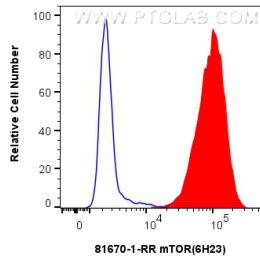
Immunohistochemical analysis of paraffin-embedded human colon cancer tissue slide using 81670-1-RR (mTOR antibody) at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



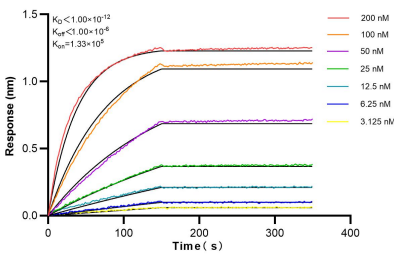
Immunohistochemical analysis of paraffin-embedded human colon cancer tissue slide using 81670-1-RR (mTOR antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (-20°C Methanol) fixed HepG2 cells using mTOR antibody (81670-1-RR, Clone: 6H23) at dilution of 1:200 and CoraLite@488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).



1x10^6 HeLa cells were intracellularly stained with 0.25 ug mTOR Recombinant antibody (81670-1-RR, Clone:6H23) and CoraLite@488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2)(red), or 0.25 ug Rabbit IgG Isotype Control Recombinant Antibody (98136-1-RR, Clone: 240953C9) (blue). Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer.



Biolayer interferometry (BLI) kinetic assays of 81670-1-RR against Human mTOR were performed. The affinity constant is below 1 pM.