

For Research Use Only

# mTOR Recombinant antibody

Catalog Number: 81670-1-RR

Featured Product



## Basic Information

|  |  |   |
|--|--|---|
| <b>Catalog Number:</b><br>81670-1-RR                         | <b>GenBank Accession Number:</b><br>NM_004958                                | <b>Purification Method:</b><br>Protein A purification   |
| <b>Size:</b><br>100ul, Concentration: 300 µg/ml by Nanodrop; | <b>GeneID (NCBI):</b><br>2475  | <b>CloneNo.:</b><br>6H23  |
| <b>Source:</b><br>Rabbit                                     | <b>Full Name:</b><br>FK506 binding protein 12-rapamycin associated protein 1 | <b>Recommended Dilutions:</b><br>WB 1:1000-1:6000<br>IP 0.5-4.0 ug for IP and 1:500-1:2000 for WB |
| <b>Isotype:</b><br>IgG                                       | <b>Calculated MW:</b><br>289 kDa   | <b>IHC 1:50-1:500</b><br><b>IF 1:50-1:500</b>   |
| <b>Immunogen Catalog Number:</b><br>AG28395                  | <b>Observed MW:</b><br>250-289 kDa   |   |

## Applications

**Tested Applications:**  
FC, IF, IHC, IP, WB, ELISA

**Species Specificity:**  
Human, Mouse, Rat

**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,

**IF:** HepG2 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.

## 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

\*\*\* 20ul sizes contain 0.1% BSA

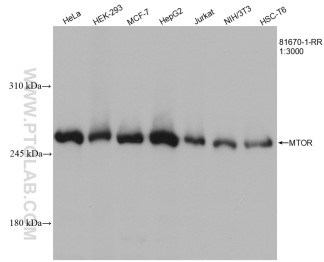
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

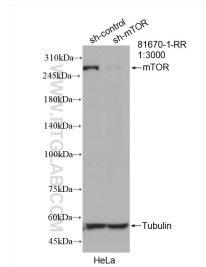
E: proteintech@ptglab.com  
W: ptglab.com

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

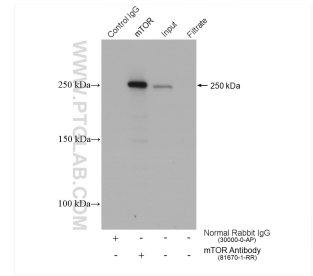
## Selected Validation Data



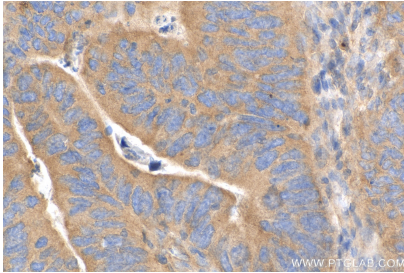
Various lysates were subjected to SDS PAGE followed by western blot with 81670-1-RR (mTOR antibody) at dilution of 1:3000 incubated at room temperature for 1.5 hours.



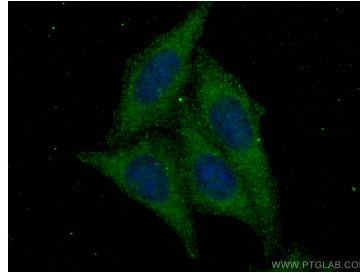
WB result of mTOR antibody (81670-1-RR; 1:3000; incubated at room temperature for 1.5 hours) with sh-Control and sh-mTOR transfected HeLa cells.



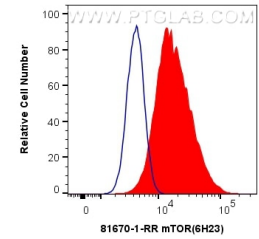
IP result of anti-mTOR(IP:81670-1-RR, 4ug; Detection:81670-1-RR 1:1000) with HeLa cells lysate 1760 ug.



Immunohistochemical analysis of paraffin-embedded human colon cancer tissue slide using 81670-1-RR (mTOR antibody) at dilution of 1:200 (under 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<sup>6</sup> HeLa cells were intracellularly stained with 0.4 ug Anti-Human mTOR (81670-1-RR, Clone:6H23) and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) at dilution 1:1000 (red), or 0.4 ug Isotype Control. Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).