For Research Use Only

Phospho-mTOR (Ser2448) Monoclonal antibody

Catalog Number:67778-1-Ig

320 Publications

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Basic Information

Catalog Number:
67778-1-Ig

Size:
100ul , Concentration: 1000 ug/ml by Nanodrop;

Source:
Mouse

Isotype:
IgG2b

GenBank Accession Number:
BC117166

GeneID (NCBI):
2475

Full Name:
FK506 binding protein 12-rapamycin associated protein 1

Calculated MW:
289 kDa

Observed MW:
289 kDa

Purification Method:
Protein A purification

CloneNo.:
2A12G3

Recommended Dilutions:
WB 1:2000-1:10000
IHC 1:500-1:2000
IF/ICC 1:50-1:500

Applications

Tested Applications:
WB, IHC, IF/ICC, FC (Intra), ELISA

Cited Applications:
WB, IHC, IF

Species Specificity:
human, mouse, rat

Cited Species:
human, mouse, rat, pig, chicken, bovine

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, NIH/3T3 cells, HEK-293T cells, HEK-293 cells, HSC-T6 cells, Calyculin A treated HeLa cells, EGF treated NIH/3T3 cells, Rapamycin treated HEK-293 cells, Calyculin A treated HEK-293 cells

IHC : human colon cancer tissue, human breast cancer tissue

IF/ICC : 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.

Notable Publications

Author	Pubmed ID	Journal	Application
Jing Chen	34650978	Front Cell Dev Biol	WB
Guangjie Zhao	36163180	Cell Death Discov	WB
Min Weng	36132221	PeerJ	WB,IF

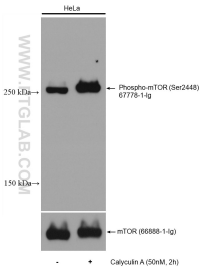
Storage

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

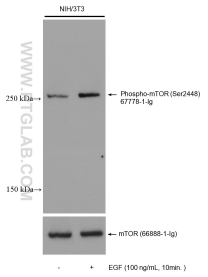
***** 20ul sizes contain 0.1% BSA**

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

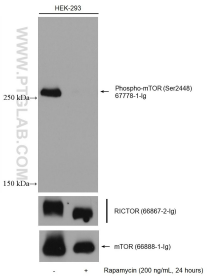
Selected Validation Data



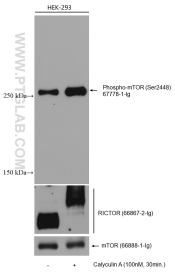
Non-treated and Calyculin A treated HeLa cells were subjected to SDS PAGE followed by western blot with 67778-1-Ig (Phospho-mTOR (Ser2448) antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



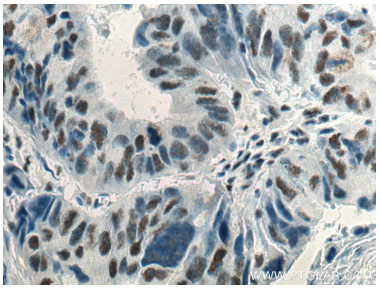
Non-treated and EGF treated NIH/3T3 cells were subjected to SDS PAGE followed by western blot with 67778-1-Ig (Phospho-mTOR (Ser2448) antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



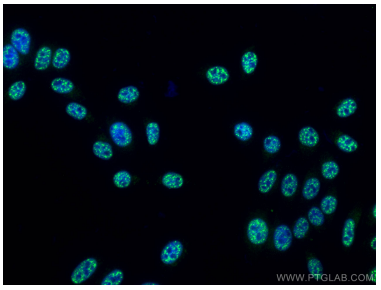
Non-treated and Rapamycin treated HEK-293 cells were subjected to SDS PAGE followed by western blot with 67778-1-Ig (Phospho-mTOR (Ser2448) antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with RICTOR antibody (66867-2-Ig) and mTOR antibody (66888-1-Ig) subsequently.



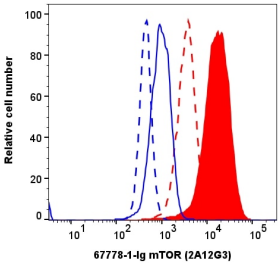
Non-treated and Calyculin A treated HEK-293 cells were subjected to SDS PAGE followed by western blot with 67778-1-Ig (Phospho-mTOR (Ser2448) antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with RICTOR antibody (66867-2-Ig) and mTOR antibody (66888-1-Ig) subsequently.



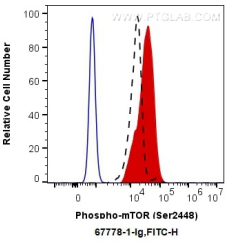
Immunohistochemical analysis of paraffin-embedded human colon cancer tissue slide using 67778-1-Ig (Phospho-mTOR (Ser2448) antibody) at dilution of 1:1000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using Phospho-mTOR (Ser2448) antibody (67778-1-Ig, Clone: 2A12G3) at dilution of 1:200 and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L).



1x10^6 100 nM Calyculin A (30 minutes) treated HeLa cells were intracellularly stained with 0.2 µg Phospho-mTOR (Ser2448) Monoclonal antibody (67778-1-Ig, Clone:2A12G3) and CoraLite® Plus 647-Goat Anti-Mouse Recombinant Secondary Antibody (H+L)(Cat.NO.RGAM005), and 0.2 µg KLH (66360-3-Ig, Clone: K11B8C4B5). Cells were fixed with 4% PFA .



1X10^6 Calyculin A treated HeLa cells were intracellularly stained with 0.5 ug Anti-Human Phospho-mTOR (Ser2448) (67778-1-Ig, Clone:2A12G3) and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L) at dilution 1:1000 (red), or 0.5 ug Control Antibody. Cells were fixed with 4% PFA and permeabilized with 90% MeOH.