

Description

The mTOR Substrates Antibody Kit provides a cost-effective tool for studying mTOR activation as well as key proteins that are phosphorylated downstream. Perfect for signal transduction researchers starting a new project, screening multiple prospective targets, or those who simply require less volume.

Product Information

The mTOR Substrates Antibody Kit contains antibodies against 5 key phospho-protein targets of the mTOR pathway.

Antigen	Catalog No.	Host, clonality	Tested Reactivity	Applications	Volume
mTOR	81670-1-RR	Rabbit Monoclonal	H, M, R	WB, IP, IHC, IF/I CC, FC (Intra)	20 uL
Phospho-mTOR (Ser2448)	80596-1-RR	Rabbit Monoclonal	H, R	WB, IF/ICC	20 uL
Phospho-p70(S6K) (Thr389)	82373-1-RR	Rabbit Monoclonal	H	WB	20 uL
Phospho-4EBP1 (Thr37)	81812-4-RR	Rabbit Monoclonal	H	WB	20 uL
Phospho-RPS6 (Ser235/236)	80130-2-RR	Rabbit Monoclonal	H	WB	20 uL

Package

5 × 20 uL

Storage

Store at -20°C. Stable for one year from the date of receipt.

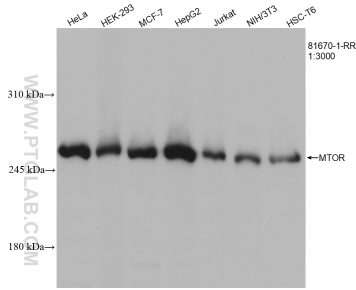
Background Information

The mammalian target of rapamycin (mTOR) forms the center of a powerful signaling pathway that regulates cell metabolism, proliferation, and survival. Its activation is contingent upon phosphorylation at the Ser2448 residue, which is typically mediated upstream by AKT. The activated mTOR can then phosphorylate multiple substrates downstream to control the various effector functions of the mTOR pathway. Phosphorylation of p70(S6K) at the Thr389 residue results in its full activation and promotion of cell proliferation and mRNA translation via subsequent phosphorylation of RPS6 at the Ser 235 and 236 residues. mTOR can also promote translation through phosphorylation of 4EBP1 at the Thr 37 and 46 residues. These phosphorylation events reduce the ability of 4EBP1 to bind to eIF4E, which in turn reduces the inhibition of cap-dependent translation.

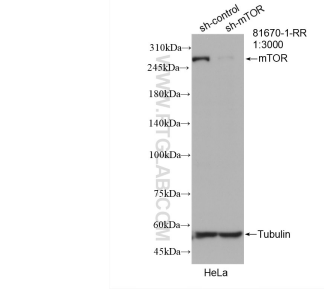
Standard Protocols

Click [here](#) to view our standard protocols for various applications including WB, IP, IHC, IF, FC, and ELISA.

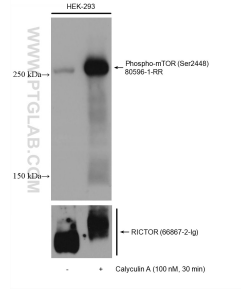
Validation Data



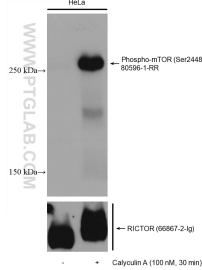
Various lysates were subjected to SDS PAGE followed by western blot with 81670-1-RR (mTOR antibody) at dilution of 1:3000 incubated at room temperature for 1.5 hours.



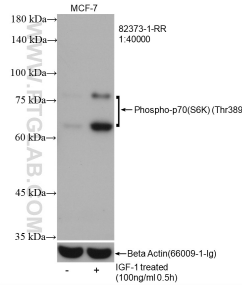
WB result of mTOR antibody (81670-1-RR; 1:3000; incubated at room temperature for 1.5 hours) with sh-Control and sh-mTOR transfected HeLa cells.



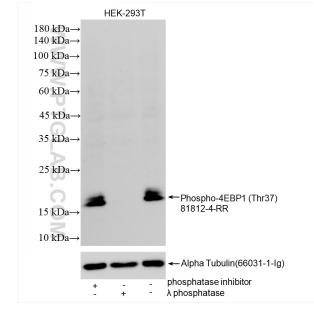
Non-treated and Calyculin A treated HEK-293 cells were subjected to SDS PAGE followed by western blot with 80596-1-RR (Phospho-mTOR (Ser2448) antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with RICTOR antibody (66867-2-Ig) subsequently.



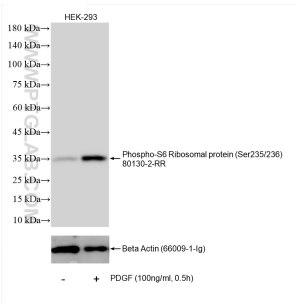
Non-treated and Calyculin A treated HeLa cells were subjected to SDS PAGE followed by western blot with 80596-1-RR (Phospho-mTOR (Ser2448) antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with RICTOR antibody (66867-2-Ig) subsequently.



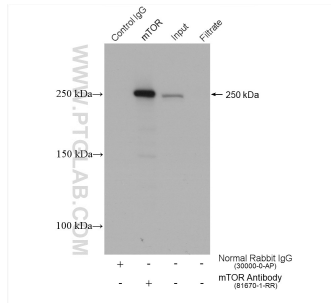
Non-treated and IGF-1 treated MCF-7 cells were subjected to SDS PAGE followed by western blot with 82373-1-RR (Phospho-p70(S6K) (Thr389) antibody) at dilution of 1:40000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with beta actin antibody (66009-1-Ig) as loading control.



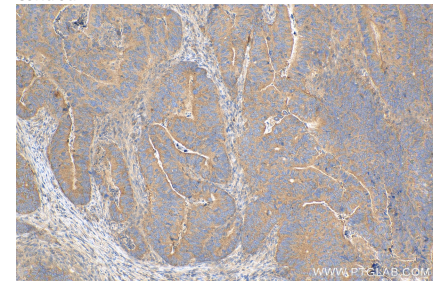
Non-treated HEK-293T cells, phosphatase inhibitor treated HEK-293T cells and lambda phosphatase treated HEK-293T cells were subjected to SDS PAGE followed by western blot with 81812-4-RR (Phospho-4EBP1 (Thr37) antibody) at dilution of 1:2000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with... Alpha Tubulin (66031-1-Ig) antibody as a loading control.



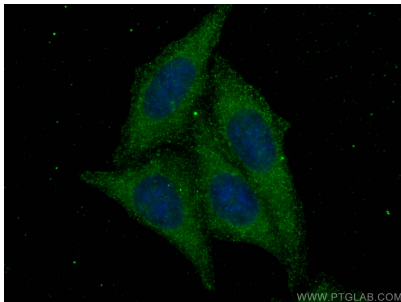
Non-treated and PDGF treated HEK-293 cells were subjected to SDS PAGE followed by western blot with 80130-2-RR (RPS6-phospho-S235/236 antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with Beta Actin (66009-1-Ig) antibody as a loading control.



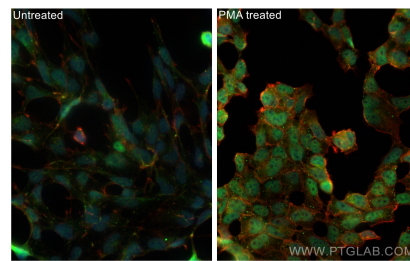
IP result of anti-mTOR (IP:81670-1-RR, 4ug; Detection:81670-1-RR 1:1000) with HeLa cells lysate 1760 ug.



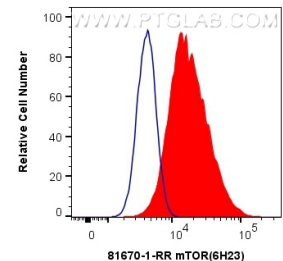
Immunohistochemical analysis of paraffin-embedded human colon cancer tissue slide using 81670-1-RR (mTOR antibody) at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



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).



Immunofluorescent analysis of (4% PFA) fixed PMA treated HEK-293 cells using Phospho-mTOR (Ser2448) antibody (80596-1-RR, Clone: 3L18) at dilution of 1:1000 and CoraLite@488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L), CL594-phalloidin (red).



1x10⁶ 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

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

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