

mTOR (phospho Ser2448) Polyclonal Antibody

Catalog No :	YP0176
Reactivity :	Human;Mouse;Rat;Bovine;Pig
Applications :	WB;IHC;IF;ELISA
Target :	mTOR
Fields :	>>EGFR tyrosine kinase inhibitor resistance;>>Endocrine resistance;>>ErbB signaling pathway;>>HIF-1 signaling pathway;>>Phospholipase D signaling pathway;>>Autophagy - other;>>Autophagy - animal;>>mTOR signaling pathway;>>PI3K-Akt signaling pathway;>>AMPK signaling pathway;>>Longevity regulating pathway;>>Longevity regulating pathway - multiple species;>>Cellular senescence;>>Apelin signaling pathway;>>Neutrophil extracellular trap formation;>>JAK-STAT signaling pathway;>>Th17 cell differentiation;>>Thermogenesis;>>Insulin signaling pathway;>>Thyroid hormone signaling pathway;>>Adipocytokine signaling pathway;>>Type II diabetes mellitus;>>Insulin resistance;>>Growth hormone synthesis, secretion and action;>>Alzheimer disease;>>Amyotrophic lateral sclerosis;>>Huntington disease;>>Spinocerebellar ataxia;>>Pathways of neurodegeneration - multiple diseases;>>Shigellosis;>>Human cytomegalovirus infection;>>Human papillomavirus infection;>>Kaposi sarcoma-associated herpesvirus infection;>>He
Gene Name :	MTOR
Protein Name :	Serine/threonine-protein kinase mTOR
Human Gene Id :	2475
Human Swiss Prot No :	P42345
Mouse Gene Id :	56717
Mouse Swiss Prot No :	Q9JLN9
Rat Gene Id :	56718
Rat Swiss Prot No :	P42346

Immunogen :	The antiserum was produced against synthesized peptide derived from human mTOR around the phosphorylation site of Ser2448. AA range:2415-2464
Specificity :	Phospho-mTOR (S2448) Polyclonal Antibody detects endogenous levels of mTOR protein only when phosphorylated at S2448.
Formulation :	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source :	Polyclonal, Rabbit,IgG
Dilution :	WB 1:500 - 1:2000. IHC 1:100 - 1:300. IF 1:200 - 1:1000. ELISA: 1:40000. Not yet tested in other applications.
Purification :	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Concentration :	1 mg/ml
Storage Stability :	-15°C to -25°C/1 year(Do not lower than -25°C)
Observed Band :	289kD
Cell Pathway :	Regulates Angiogenesis; Insulin Receptor; ErbB/HER; mTOR; B Cell Receptor; PI3K/Akt; AMPK
Background :	The protein encoded by this gene belongs to a family of phosphatidylinositol kinase-related kinases. These kinases mediate cellular responses to stresses such as DNA damage and nutrient deprivation. This protein acts as the target for the cell-cycle arrest and immunosuppressive effects of the FKBP12-rapamycin complex. The ANGPTL7 gene is located in an intron of this gene. [provided by RefSeq, Sep 2008],
Function :	function:Acts as the target for the cell-cycle arrest and immunosuppressive effects of the FKBP12-rapamycin complex. Part of the TORC2 complex which plays a critical role in AKT1 Ser-473 phosphorylation, and may modulate the phosphorylation of PKCA and regulate actin cytoskeleton organization.,similarity:Belongs to the PI3/PI4-kinase family.,similarity:Contains 1 FAT domain.,similarity:Contains 1 FATC domain.,similarity:Contains 1 PI3K/PI4K domain.,similarity:Contains 7 HEAT repeats.,subunit:Interacts with the FKBP12-rapamycin complex. Binds UBQLN1. Forms part of the mammalian target of rapamycin 2 complex (TORC2) comprised of FRAP1, GBL, PRR5, RICTOR and SIN. TORC2 does not bind to and is not sensitive to FKBP12-rapamycin. Binds directly to PRR5 and RICTOR within the TORC2 complex.,tissue specificity:Expressed in numerous tissues, with highest levels in testis.,

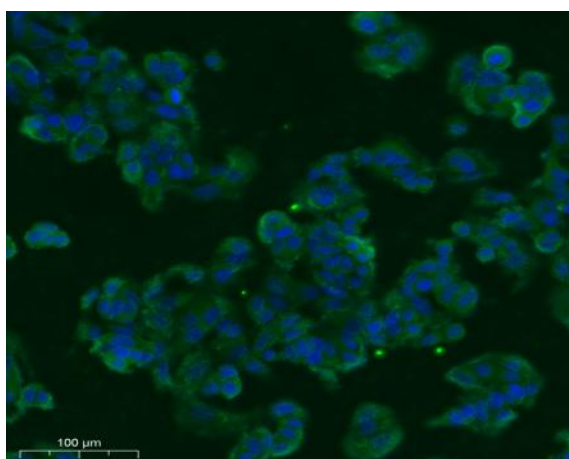
Subcellular Location :

Endoplasmic reticulum membrane ; Peripheral membrane protein ; Cytoplasmic side . Golgi apparatus membrane ; Peripheral membrane protein ; Cytoplasmic side . Mitochondrion outer membrane ; Peripheral membrane protein ; Cytoplasmic side . Lysosome . Cytoplasm . Nucleus, PML body . Microsome membrane . Lysosome membrane . Cytoplasmic vesicle, phagosome . Shuttles between cytoplasm and nucleus. Accumulates in the nucleus in response to hypoxia (By similarity). Targeting to lysosomes depends on amino acid availability and RRAGA and RRAGB (PubMed:18497260, PubMed:20381137). Lysosome targeting also depends on interaction with MEAK7. Translocates to the lysosome membrane in the presence of TM4SF5 (PubMed:30956113). .

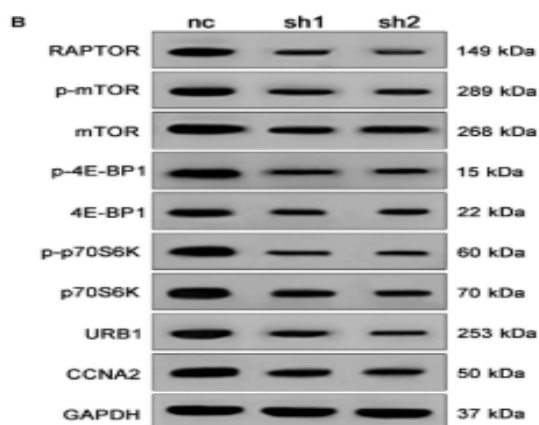
Expression :

Expressed in numerous tissues, with highest levels in testis.

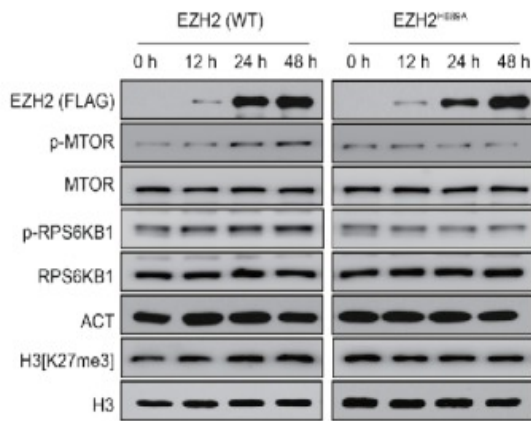
Products Images



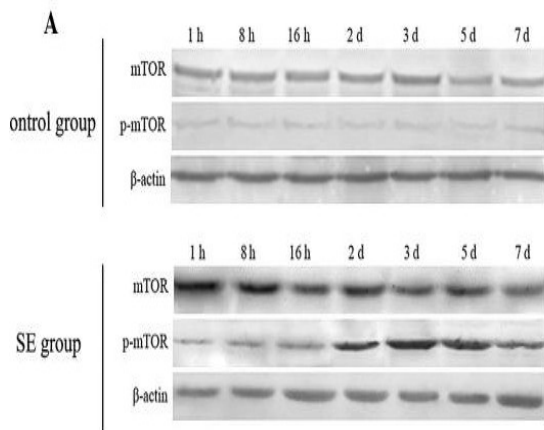
Immunofluorescence analysis of MCF7 cell. 1, primary Antibody was diluted at 1:100(4°C overnight). 2, Goat Anti Rabbit IgG (H&L) - AFleur 488 Secondary antibody (catalog No:RS3211) was diluted at 1:500(room temperature, 50min).



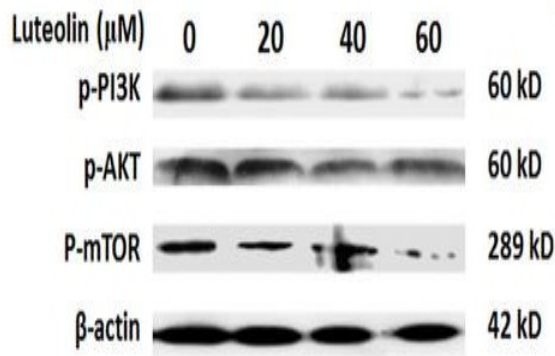
Wang, Tao, et al. "RAPTOR promotes colorectal cancer proliferation by inducing mTORC1 and upregulating ribosome assembly factor URB1." *Cancer medicine* 9.4 (2020): 1529-1543.



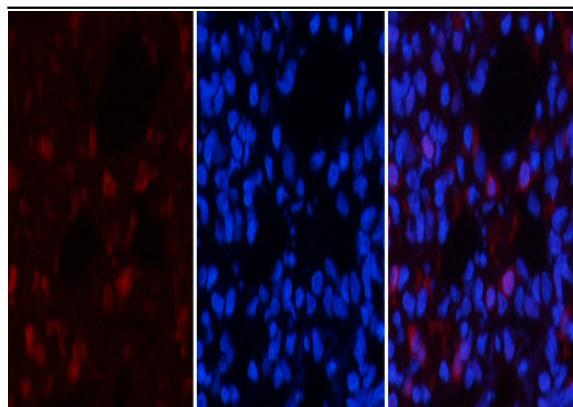
Wei, Fu-Zheng, et al. "Epigenetic regulation of autophagy by the methyltransferase EZH2 through an MTOR-dependent pathway." *Autophagy* 11.12 (2015): 2309-2322.



San, Yong-Zhi, et al. "Peroxisome proliferator-activated receptor- γ agonist inhibits the mammalian target of rapamycin signaling pathway and has a protective effect in a rat model of status epilepticus." *Molecular medicine reports* 12.2 (2015): 1877-1883.



Lu, Xueying, et al. "Luteolin induces apoptosis in vitro through suppressing the MAPK and PI3K signaling pathways in gastric cancer." *Oncology letters* 14.2 (2017): 1993-2000.

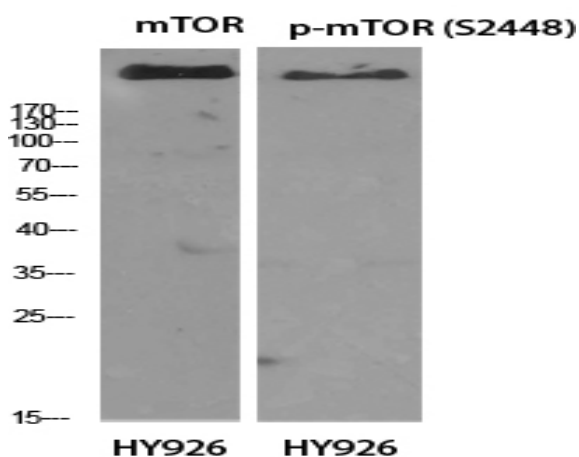


A

B

C

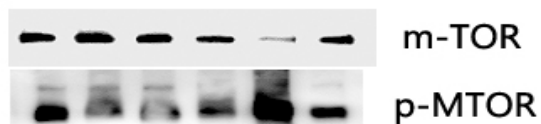
Immunofluorescence analysis of rat-lung tissue. 1, mTOR (phospho Ser2448) Polyclonal Antibody (red) was diluted at 1:200 (4°C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50 min). 3, Picture B: DAPI (blue) 10 min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B



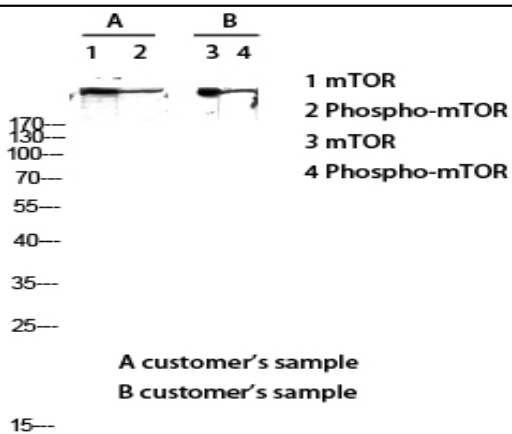
Western Blot analysis of various cells using Phospho-mTOR (S2448) Polyclonal Antibody diluted at 1:1000

The picture was kindly provided by our customer

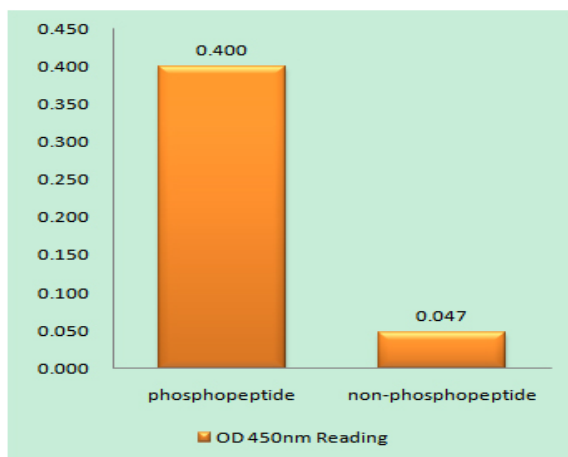
HepG2:



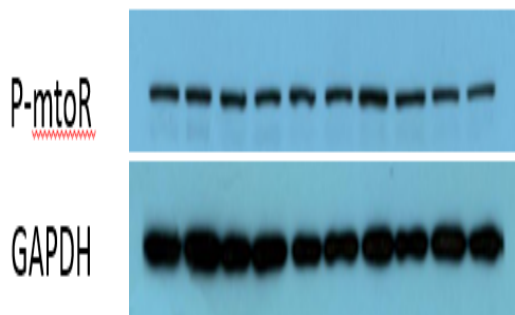
Southwest University



Western blot analysis of customer's lysis using Phospho-mTOR (S2448) antibody. Antibody was diluted at 1:1000



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using mTOR (Phospho-Ser2448) Antibody



The picture was kindly provided by our customer. Primary antibody was diluted at 1:1000. Loading control antibody was diluted at 1:20000