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Anti-mTOR/Tor Rabbit Monoclonal Antibody

Catalog Number: M00003

Overview

Product Name	Anti-mTOR/Tor Rabbit Monoclonal Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-mTOR/Tor Rabbit Monoclonal Antibody catalog # M00003. Tested in WB, IHC, ICC/IF, IP, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IP, IF, IHC, ICC, WB
Clonality	Monoclonal CBD-13
Formulation	Rabbit IgG in stabilizing components, phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P42345

Technical Details

Immunogen	A synthesized peptide derived from human mTOR
Isotype	Rabbit IgG
Form	Liquid
Concentration	0.5mg/ml
Purification	Affinity-chromatography
Suggested Dilutions	WB 1:500-2000 IHC 1:50-200 ICC/IF 1:50-200 IP 1:30 FC 1:20

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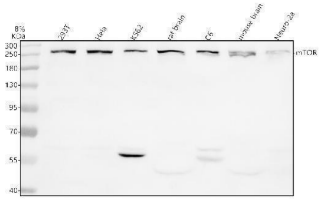
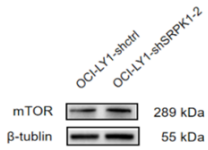
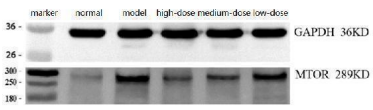
Anti-mTOR/Tor Rabbit Monoclonal Antibody (M00003) Images



Western blot analysis of MTOR using anti-MTOR antibody (M00003). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human 293T whole cell lysates, Lane 2: human Hela whole cell lysates, Lane 3: human K562 whole cell lysates, Lane 4: rat brain tissue lysates, Lane 5: rat C6 whole cell lysates, Lane 6: mouse brain tissue lysates, Lane 7: mouse Neuro-2a whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-MTOR antigen affinity purified monoclonal antibody (Catalog # M00003) at 1:500 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:500 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for MTOR at approximately 289 kDa. The expected band size for MTOR is at 289 kDa.



Western blot analysis of mTOR/Tor using anti-mTOR/Tor antibody (M00003). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1-2: human OCI-LY1-Hmgb1 SRPK1 KOwhole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-mTOR/Tor antigen affinity purified polyclonal antibody (M00003) at 1:3000 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054) at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for mTOR/Tor at approximately 289 kDa. The expected band size for mTOR/Tor is at 289kDa.



Western blot analysis of mTOR/Tor using anti-mTOR/Tor antibody (M00003). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: normal group-Rat skeletal muscle tissue lysates, Lane 2: model group-Rat skeletal muscle tissue lysates, Lane 3: high-dose group-Rat skeletal muscle tissue lysates, Lane 4: medium-dose group-Rat skeletal muscle tissue lysates, Lane 5: low-dose group-Rat skeletal muscle tissue lysates. After

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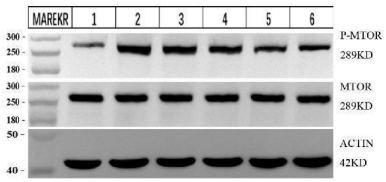
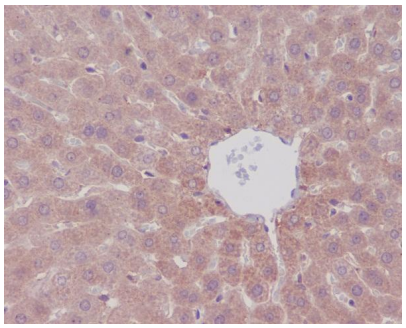
electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-mTOR/Tor antigen affinity purified polyclonal antibody (M00003) at 1:2000 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054) at a dilution of 1:10,000 for 1 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with ChemiDoc MP system. A specific band was detected for mTOR/Tor at approximately 289 kDa. The expected band size for mTOR/Tor is at 289kDa.



Western blot analysis of MTOR using anti-MTOR antibody (M00003). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: mouse 4T1 whole cell lysates, Lane 2: LPS-stimulated mouse 4T1 whole cell lysates, Lane 3: Low-dose drug mouse 4T1 whole cell lysates, Lane 4: Medium-dose drug mouse 4T1 whole cell lysates, Lane 5: High-dose drug mouse 4T1 whole cell lysates, Lane 6: Positive control drug mouse 4T1 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-MTOR antigen affinity purified monoclonal antibody (Catalog # M00003) at 1:10000 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with ChemiDoc MP system. A specific band was detected for MTOR at approximately 289 kDa. The expected band size for MTOR is at 289 kDa.



Immunohistochemical analysis of paraffin-embedded rat liver, using mTOR Antibody.

PI3K/Akt/mTOR pathway is involved in the cardioprotective effects of LLC. (A) Expression levels of PI3K, p-Akt, Akt, p-mTOR and mTOR in hearts were analyzed. (B) Representative western blots of PI3K (p110alpha), p-Akt (Ser473), Akt, p-mTOR (Ser2448), mTOR, LC3, Beclin 1 and p62 in the presence or absence of 20 umol·L -1 LY294002 and 40 ug·mL -1 LLC. (C) The cell viability was analyzed by MTT assay. (D) The cell injury was detected by LDH

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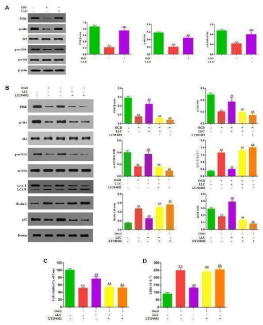
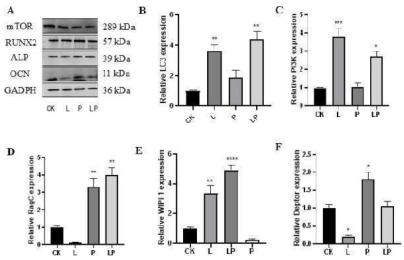
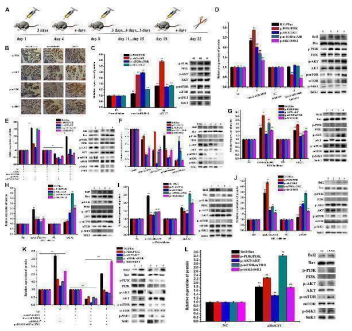


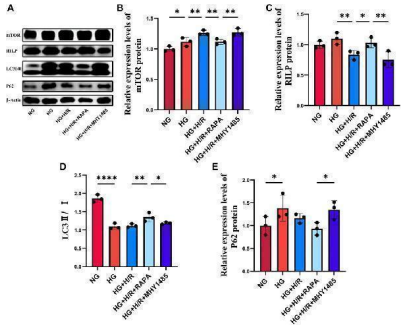
measurements. All experiments were repeated at least three times. Data were presented as means ± SD. ∗∗ P < 0.01 vs. Con group, ## P < 0.01 vs. OGD group, & P < 0.05, && P < 0.01 vs. OGD+LLC group.Index in PubMed under a CC BY license. PMID: 29651246



Verification of the effect of Pso on PDLSCs. (A) Representative protein expression bands for mTOR, OCN, RUNX2, ALP, and GADPH. (B–F) : Expression of LC3, PI3K, Rag C, WIPI 1, and Deptor genes. CK, blank control; L, LPS group; P, Pso group; LP, Pso/LPS co-culture group. Data are presented as mean ± SD. * P < 0.05, ** P < 0.01, *** P < 0.001, and **** P < 0.0001 vs. control group.Index in PubMed under a CC BY license. PMID: 40718710



Relationship between ciRNA13761/novel-miR-3880/ ELF2 axis and PI3K/AKT/mTOR/S6K1 pathway. (A) Schematic diagram of animal treatment. C57BL/6 mice were injected with novel-miR-3880 or si ELF2 in an interval of three days and four days alternatively. Samples were harvested at day 22. (B) Immunohistochemistry of mammary gland for p-PI3K, p-AKT, p-mTOR and p-S6K1 in Normal Saline, novel-miR-3880 and si ELF2 groups. (C) Protein phosphorylation level of PI3K, AKT, mTOR and S6K1 in mammary gland. (D,E) Effects of novel-miR-3880 and ELF2 on Bcl2/Bax pathway and protein phosphorylation level of PI3K, AKT, mTOR and S6K1 in MEC. (F) PI3K, AKT, mTOR and S6K1 inhibitors suppressed the phosphorylation of PI3K, AKT, mTOR and S6K1 in MEC. (G–J) The role of novel-miR-3880 and si ELF2 in Bcl2/Bax and protein phosphorylation level of PI3K, AKT, mTOR and S6K1 in MEC with PI3K, AKT, mTOR or S6K1 inhibited. (K) Regulation of ciRNA13761 on Bcl2/Bax and PI3K, AKT, mTOR and S6K1 phosphorylation, and the balance effects of novel-miR-3880. (L) Effects of si DOCK1 on Bcl2/Bax and PI3K, AKT, mTOR and S6K1 phosphorylation.Index in PubMed under a CC BY license. PMID: 32656203



(A) WB results for mTOR, RILP, LC3 and P62. (B) Relative expression levels of mTOR protein. (C) Relative expression levels of RILP protein. (D) The ratio of LC3II to LC3I. (E) Relative expression levels of P62 protein. (*: P < 0.05, **: P < 0.01, ***: P < 0.001, ****: P < 0.0001).Index in PubMed under a CC BY license. PMID: 39958873

Eriocitrin and quercetin are responsible for anti-proliferation

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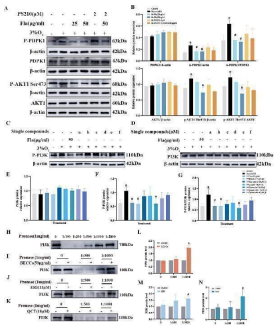
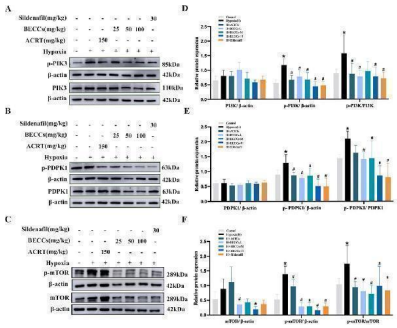
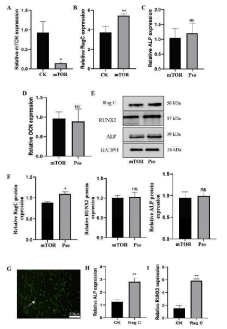


by targeting the PI3K protein in PASMCs under hypoxic conditions. ERI, eriocitrin; QCT, quercetin. (A, B) Primitive bands and quantitative evaluation of p-mTOR, mTOR, p-AKT1 (Ser473), and AKT1 with or without PS210 (2 uM) by Western blotting in PASMCs under 3% O 2 . n = 3. All data are represented as the mean ± SD. * p < 0.05 vs. control group, # p < 0.05 vs. 3% O 2 group, and p < 0.05 vs. 3% O 2 + FLA-50 ug/ml group. (C–G) Primitive bands and quantitative densities of p-PI3K and PI3K by Western blots. n = 3. All data are represented as the mean ± SD. * p < 0.05 vs. control group and # p < 0.05 vs. 3% O 2 group. (H–N) BECC, ERI, and QCT treatment increased the stability of PI3K in PASMC protease lysates by the DARTS experiment. (H–K) Primitive Western blots of PI3K. (L–N) Quantitative evaluation of PI3K levels. n = 3. All data are represented as the mean ± SD. * p < 0.05 vs. DMSO group.Index in PubMed under a CC BY license. PMID: 40385484



BECCs regulate PI3K, PDPK1, and mTOR protein levels in HAPH rats. (A–C) Primitive bands of p-PI3K, PI3K, p-PDPK1, PDPK1, p-mTOR, and mTOR by Western blots in lung tissues. (D–F) Quantitative evaluation of p-PI3K, PI3K, p-PDPK1, PDPK1, p-mTOR, and mTOR in lung tissues. n = 5. All data are represented as the mean ± SD. * p < 0.05 vs. control group and # p < 0.05 vs. hypoxia group.Index in PubMed under a CC BY license. PMID: 40385484



Expression of related genes and proteins after the addition of mTOR inhibitor. (A) Expression level of the mTOR gene after adding the inhibitor rapamycin. (B) Change in the expression levels of the Rag C gene. (C–D) Changes in the expression levels of the osteogenesis-related genes ALP and RUNX2. (E) Protein expression levels for of Rag C, Deptor, ALP, and RUNX2. CK, control group; mTOR, mTOR-inhibitor group. (F) Relative expression levels of Rag C, ALP, and RUNX2 proteins. mTOR, mTOR-inhibitor group; Pso, mTOR inhibitor + Pso group. (G) Representative images of PDLSCs with Rag C lentiviral knockdown; green fluorescence indicates the lentiviral vector particles. (H–I) Expression changes in ALP and RUNX2 in PDLSCs with Rag C knockdown. CK, control group; Rag C, PDLSCs (scale bar = 200 um). Data are presented as mean ± SD. *P < 0.05, **P < 0.01, ***P < 0.001, and ****P < 0.0001 vs. the control group.Index in PubMed under a CC BY license. PMID: 40718710

4 Publications Citing This Product

1. PubMed ID: 33649809, Nie L,Liu M,Chen J,Wu Q,Li Y,Yi J,Zheng X,Zhang J,Chu C,Yang J.Hydrogen sulfide ameliorates doxorubicin‐induced myocardial fibrosis in rats via the PI3K/AKT/mTOR pathway.Mol Med Rep.2021 Apr;23(4):299.doi:10.3892/mmr.2021.11938.Epub 2021 Mar 2.PMID:336498

2. PubMed ID: -, Lu Kong,Yongya Wu,Wangcheng Hu,Lin Liu,Yuying Xue,Geyu Liang,Mechanisms underlying reproductive toxicity induced by nickel nanoparticles identified by comprehensive gene expression analysis in GC-1 spg cells,Environmental Pollution,2021,116556,ISSN 0269-7

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3. PubMed ID: 29904395, Rapamycin provides anti%u2011epileptogenic effect in a rat model of post%u2011traumatic epilepsy via deactivation of mTOR signaling pathway

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