Anti-mTOR Antibody

R1510-21

Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	IF-Cell, IHC-P
Molecular Wt:	289 kDa

Description: The mechanistic target of rapamycin (mTOR), also known as the mammalian target of rapamycin and FK506-binding protein 12-rapamycin-associated protein 1 (FRAP1), is a kinase that in humans is encoded by the MTOR gene. mTOR is a member of the phosphatidylinositol 3-kinase-related kinase family of protein kinases. mTOR links with other proteins and serves as a core component of two distinct protein complexes, mTOR complex 1 and mTOR complex 2, which regulate different cellular processes. In particular, as a core component of both complexes, mTOR functions as a serine/threonine protein kinase that regulates cell growth, cell proliferation, cell motility, cell survival, protein synthesis, autophagy, and transcription. As a core component of mTORC2, mTOR also functions as a tyrosine protein kinase that promotes the activation of insulin receptors and insulin-like growth factor 1 receptors. mTORC2 has also been implicated in the control and maintenance of the actin cytoskeleton.

Immunogen: Synthetic peptide within human MTOR aa 2255-2341.

Positive control: MCF-7, HepG2, rat testis tissue, rat brain tissue, mouse testis tissue, mouse brain tissue.

Subcellular location: Endoplasmic reticulum, mitochondrion, nucleus.

Database links: SwissProt: P42345 Human

Recommended Dilutions:

IF-Cell	1:50-1:200
IHC-P	1:50-1:200
WB	1:200-1:500

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃ or -80℃. Avoid repeated freeze / thaw cycles.

Purity: Immunogen affinity purified.

Images

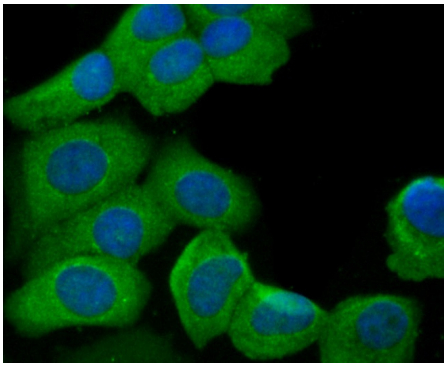

Fig1: ICC staining MTOR in MCF-7 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

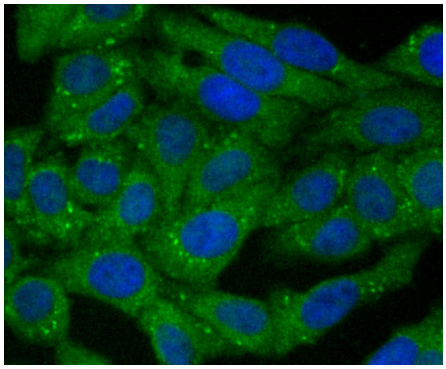

Fig2: ICC staining MTOR in HepG2 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

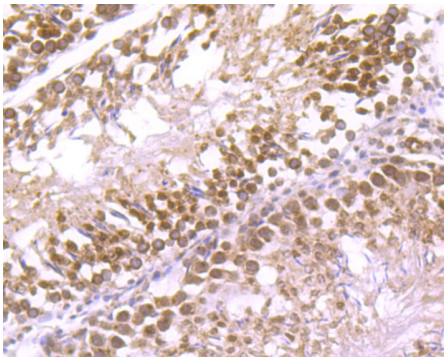

Fig3: Immunohistochemical analysis of paraffin-embedded rat testis tissue using anti-MTOR antibody. Counter stained with hematoxylin.

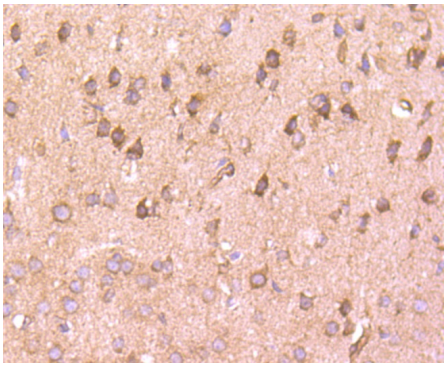

Fig4: Immunohistochemical analysis of paraffin-embedded rat brain tissue using anti-MTOR antibody. Counter stained with hematoxylin.

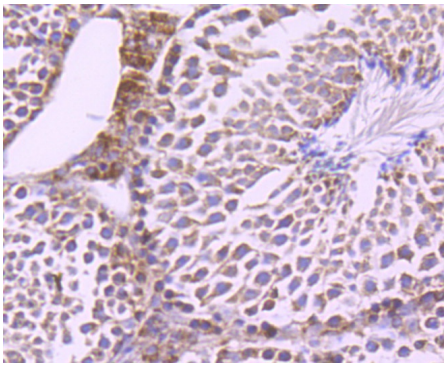

Fig5: Immunohistochemical analysis of paraffin-embedded mouse testis tissue using anti-MTOR antibody. Counter stained with hematoxylin.

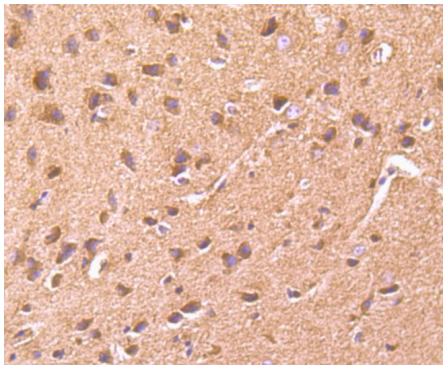

Fig6: Immunohistochemical analysis of paraffin-embedded mouse brain tissue using anti-MTOR antibody. Counter stained with hematoxylin.

Background References

1. Zhang Y et al. Effect of Tetramethylpyrazine on Atherosclerosis and SCAP/SREBP-1c Signaling Pathway in ApoE(-/-) Mice Fed with a High-Fat Diet. Evid Based Complement Alternat Med 2017:3121989 (2017).
2. Huang G et al. Notoginsenoside R1 attenuates glucose-induced podocyte injury via the inhibition of apoptosis and the activation of autophagy through the PI3K/Akt/mTOR signaling pathway. Int J Mol Med 39:559-568 (2017).