

RICTOR Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1443a**Specification**

RICTOR Antibody - Product Information

Application	WB, IF, IHC, FC
Primary Accession	Q6R327
Reactivity	Human, Mouse, Monkey
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	192kDa KDa

Description

Cell growth is a fundamental biological process whereby cells accumulate mass and increase in size. The mammalian TOR (mTOR) pathway regulates growth by coordinating energy and nutrient signals with growth factor-derived signals. mTOR is a large protein kinase with two different complexes. One complex contains mTOR, GβL and raptor, which is a target of rapamycin. The other complex, insensitive to rapamycin, includes mTOR, GβL, Sin1 and rictor. The mTOR-rictor complex phosphorylates Ser473 of Akt/PKB in vitro. This phosphorylation is essential for full Akt/PKB activation. Furthermore, an siRNA knockdown of rictor inhibits Ser473 phosphorylation in 3T3-L1 adipocytes. This complex has also been shown to phosphorylate the rapamycin-resistant mutants of S6K1, another effector of mTOR.

Immunogen

Purified recombinant fragment of human RICTOR expressed in E. Coli.

Formulation

Ascitic fluid containing 0.03% sodium azide.

RICTOR Antibody - Additional Information

Gene ID 253260

Other Names

Rapamycin-insensitive companion of mTOR, AVO3 homolog, hAVO3, RICTOR
{ECO:0000312|EMBL:EAW55980.1}

Dilution

WB~~1/500 - 1/2000
IF~~1/200 - 1/1000
IHC~~1/500 - 1/2000
FC~~1/200 - 1/400

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

RICTOR Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

RICTOR Antibody - Protein Information

Name RICTOR ([HGNC:28611](#))

Function

Subunit of mTORC2, which regulates cell growth and survival in response to hormonal signals. mTORC2 is activated by growth factors, but, in contrast to mTORC1, 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. mTORC2 plays a critical role in AKT1 'Ser-473' phosphorylation, which may facilitate the phosphorylation of the activation loop of AKT1 on 'Thr-308' by PDK1 which is a prerequisite for full activation. mTORC2 regulates the phosphorylation of SGK1 at 'Ser-422'. mTORC2 also modulates the phosphorylation of PRKCA on 'Ser-657'. Plays an essential role in embryonic growth and development.

RICTOR Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

RICTOR Antibody - Images

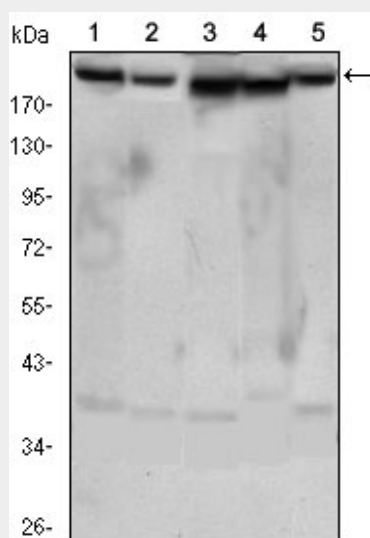


Figure 1: Western blot analysis using RICTOR mouse mAb against Hela (1), PANC-1 (2), MOLT4 (3), HepG2 (4) and HEK293 (5) cell lysate.

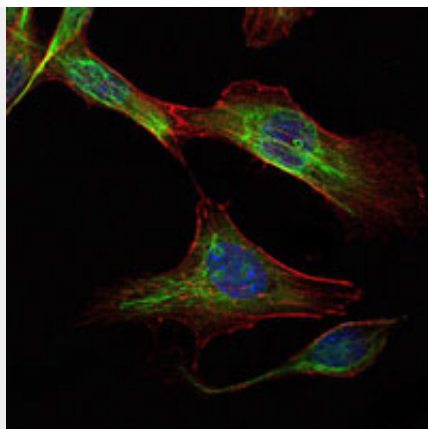


Figure 2: Immunofluorescence analysis of NIH/3T3 cells using RICTOR mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

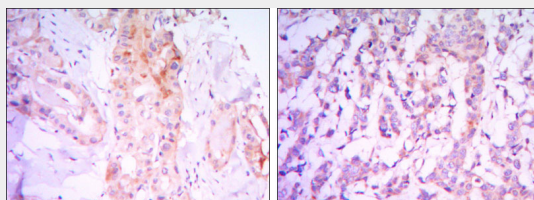


Figure 3: Immunohistochemical analysis of paraffin-embedded thyroid gland tissues (left) and human breast carcinoma (right) using RICTOR mouse mAb with DAB staining.

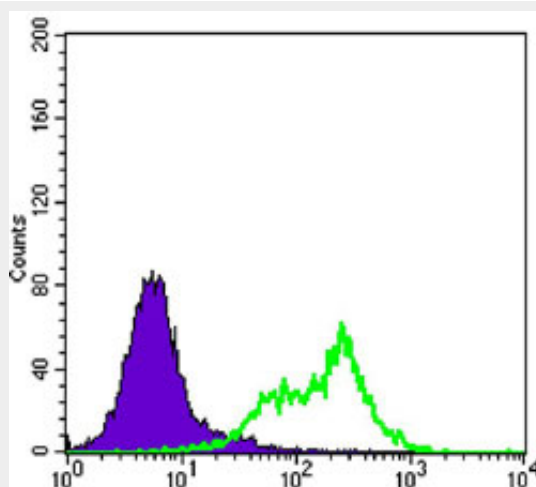


Figure 4: Flow cytometric analysis of Hela cells using RICTOR mouse mAb (green) and negative control (purple).

RICTOR Antibody - References

1. Genes Dev. 2006 Oct 15;20(20):2820-32.
2. Biochem Biophys Res Commun. 2008 Aug 8;372(4):578-83.