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RICTOR Antibody (C-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7259b

Specification

RICTOR Antibody (C-term) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	Q6R327
Other Accession	Q6QI06
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**192218**
Antigen Region	**1617-1650**

RICTOR Antibody (C-term) - Additional Information

Gene ID 253260

Other Names
Rapamycin-insensitive companion of mTOR, AVO3 homolog, hAVO3, RICTOR {ECO:0000312|EMBL:EAW559801}

Target/Specificity
This RICTOR antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1617-1650 amino acids from the C-terminal region of human RICTOR.

Dilution
WB~~1:1000
IHC-P~~1:10~50

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

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

Precautions
RICTOR Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

RICTOR Antibody (C-term) - Protein Information

Name RICTOR {ECO:0000303|PubMed:15268862, ECO:0000312|HGNC:HGNC:28611}

Function Component of the mechanistic target of rapamycin complex 2 (mTORC2), which transduces signals from growth factors to pathways involved in proliferation, cytoskeletal organization, lipogenesis and anabolic output (PubMed:15268862, PubMed:15718470, PubMed:19720745, PubMed:19995915, PubMed:21343617, PubMed:33158864, PubMed:35904232, PubMed:35926713). In response to growth factors, mTORC2 phosphorylates and activates AGC protein kinase family members, including AKT (AKT1, AKT2 and AKT3), PKC (PRKCA, PRKCB and PRKCE) and SGK1 (PubMed:19720745, PubMed:19935711, PubMed:19995915). In contrast to mTORC1, mTORC2 is nutrient-insensitive (PubMed:15467718, PubMed:21343617). Within the mTORC2 complex, RICTOR probably acts as a molecular adapter (PubMed:21343617, PubMed:33158864, PubMed:35926713). RICTOR is responsible for the FKBP12-rapamycin-insensitivity of mTORC2 (PubMed:33158864). mTORC2 plays a critical role in AKT1 activation by mediating phosphorylation of different sites depending on the context, such as 'Thr-450', 'Ser-473', 'Ser-477' or 'Thr-479', facilitating the phosphorylation of the activation loop of AKT1 on 'Thr-308' by PDPK1/PDK1 which is a prerequisite for full activation (PubMed:15718470, PubMed:19720745, PubMed:19935711, PubMed:35926713). mTORC2 catalyzes the phosphorylation of SGK1 at 'Ser-422' and of PRKCA on 'Ser-657' (By similarity). The mTORC2 complex also phosphorylates various proteins involved in insulin signaling, such as FBXW8 and IGF2BP1 (By similarity). mTORC2 acts upstream of Rho GTPases to regulate the actin cytoskeleton, probably by activating one or more Rho-type guanine nucleotide exchange factors (PubMed:15467718). mTORC2 promotes the serum-induced formation of stress-fibers or F-actin (PubMed:15467718).

Cellular Location
Cell membrane. Endoplasmic reticulum membrane. Lysosome membrane. Note=The mTORC2 complex localizes to membranes: mTORC2 is active at the plasma membrane, endoplasmic reticulum membrane and lysosomes (PubMed:21867682). Iin lysosomal membrane, mTORC2 is sensitive to lysosomal positioning in the cell (PubMed:31130364).

RICTOR Antibody (C-term) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

RICTOR Antibody (C-term) - Images

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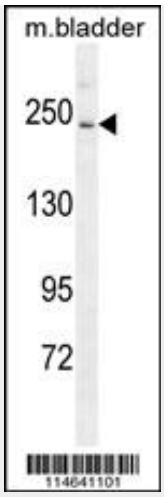
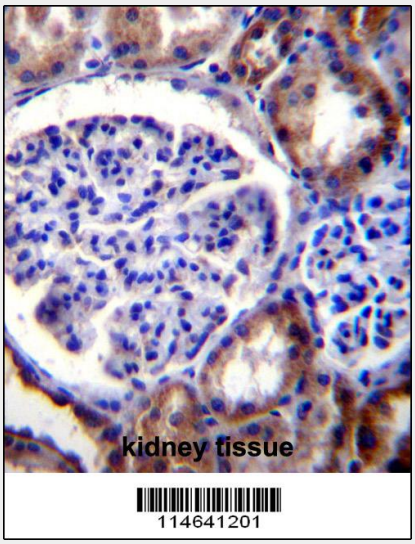


RICTOR Antibody (C-term) (Cat. #AP7259b) western blot analysis in mouse bladder tissue lysates (35ug/lane).This demonstrates the RICTOR antibody detected the RICTOR protein (arrow).



RICTOR Antibody (C-term) (Cat. #AP7259b)immunohistochemistry analysis in formalin fixed and paraffin embedded human kidney tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of RICTOR Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

RICTOR Antibody (C-term) - Background

RICTOR and MTOR (FRAP1) are components of a protein complex that integrates nutrient- and growth factor-derived signals to regulate cell growth.

RICTOR Antibody (C-term) - References

Pearce,L.R., Biochem. J. 405 (3), 513-522 (2007)
Yang,Q., Genes Dev. 20 (20), 2820-2832 (2006)
Jacinto,E., Cell 127 (1), 125-137 (2006)