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Rictor Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7259a

Product Information

Application	WB, IHC-P, E
Primary Accession	Q6R327
Other Accession	Q6QI06
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	192218
Antigen Region	252-281

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 252-281 amino acids from the N-terminal region of human Rictor.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
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 (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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). In lysosomal membrane, mTORC2 is sensitive to lysosomal positioning in the cell (PubMed:31130364).

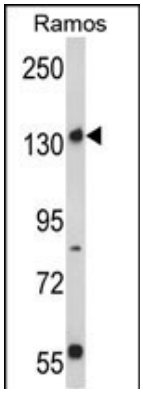
Background

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

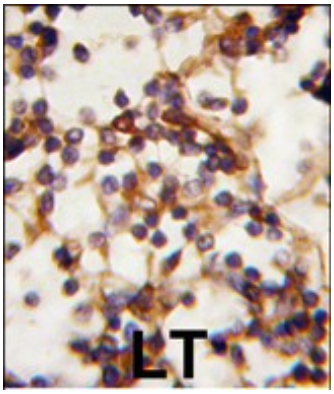
References

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)

Images



Western blot analysis of Rictor Antibody (N-term) (Cat. #AP7259a) in Ramos cell line lysates (35ug/lane). RICTOR (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human Lymph tissue reacted with Rictor antibody (N-term)(Cat.#AP7259a), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Citations

- Select nutrients in the ovine uterine lumen. VI. Expression of FK506-binding protein 12-rapamycin complex-associated protein 1 (FRAP1) and regulators and effectors of mTORC1 and mTORC2 complexes in ovine uteri and conceptuses.

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