10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

RICTOR Antibody
Rabbit Polyclonal Antibody
Catalog # ALS17230

Specification

RICTOR Antibody - Product Information

Application	**IHC-P, WB**
Primary Accession	Q6R327
Other Accession	253260
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**192218**

RICTOR Antibody - Additional Information

Gene ID 253260

Other Names
RICTOR, AVO3 homolog, HAVO3, MAVO3, PIA, KIAA1999, TORC2-specific protein AVO3, AVO3, Pianissimo

Reconstitution & Storage
PBS, pH 7.4, 0.02% sodium azide. Store at -20°C for up to one year.

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

RICTOR Antibody - 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:<a href="http://www.uniprot.org/citations/19935711"

target="_blank">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).

Volume
50 µl

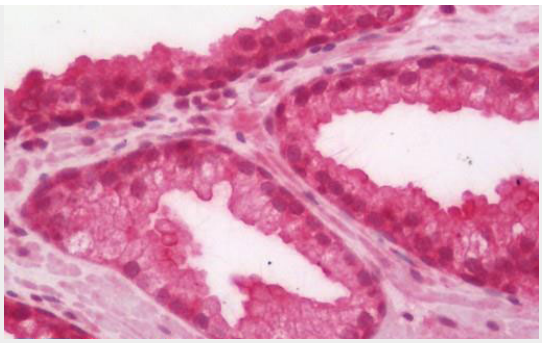
RICTOR Antibody - Protocols

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

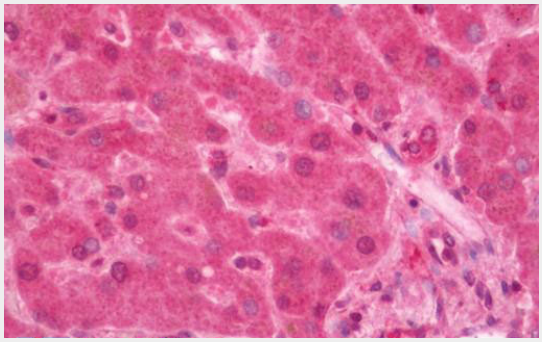
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

RICTOR Antibody - Images

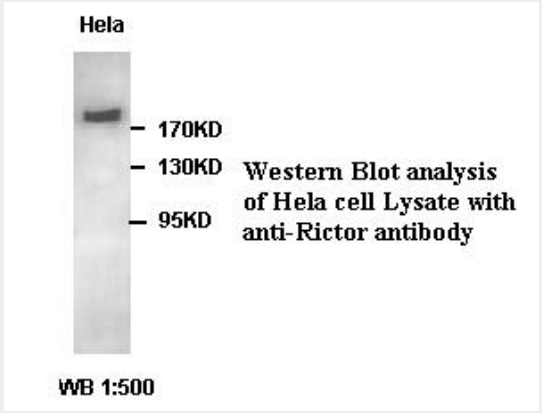
10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



Human Prostate: Formalin-Fixed, Paraffin-Embedded (FFPE)



Human Liver: Formalin-Fixed, Paraffin-Embedded (FFPE)



western blot analysis of hela cell lysate with anti-rictor antibody

RICTOR Antibody - Background

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 - References

Sarbassov D.D.,et al.Curr. Biol. 14:1296-1302(2004).
Bechtel S.,et al.BMC Genomics 8:399-399(2007).

Schmutz J.,et al.Nature 431:268-274(2004).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
Ohara O.,et al.DNA Res. 9:47-57(2002).