

# Rictor (1G11): sc-81538

## BACKGROUND

FRAP is a large protein kinase that is the mammalian target of rapamycin, an immunosuppressant that blocks vessel restenosis and also has potential anticancer applications. Rapamycin-insensitive companion of FRAP, also designated Rictor, shares homology with pianissimo from *D. discoideum*, Ste20p from *S. pombe*, and AVO3p from *S. cerevisiae*. Rictor forms a complex with FRAP, which is important in cell growth regulation as it integrates growth factor and nutrient derived signals. The Rictor-FRAP complex plays a role in PKC $\alpha$  phosphorylation, directly phosphorylates Akt/PKB on Ser 473 *in vitro* and facilitates Thr 308 phosphorylation by PDK1. It also may function as a drug target in tumors that have lost expression of PTEN, a tumor suppressor that opposes activation of Akt/PKB.

## REFERENCES

1. Ohara, O., et al. 2002. Characterization of size-fractionated cDNA libraries generated by the *in vitro* recombination-assisted method. *DNA Res.* 9: 47-57.
2. Beausoleil, S.A., et al. 2004. Large-scale characterization of HeLa cell nuclear phosphoproteins. *Proc. Natl. Acad. Sci. USA* 101: 12130-12135.

## CHROMOSOMAL LOCATION

Genetic locus: RICTOR (human) mapping to 5p13.1; Rictor (mouse) mapping to 15 A1.

## SOURCE

Rictor (1G11) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to Rictor of human origin.

## PRODUCT

Each vial contains 50  $\mu$ g IgG<sub>1</sub> kappa light chain in 0.5 ml of PBS with < 0.1% sodium azide, 0.1% gelatin, PEG and sucrose.

## APPLICATIONS

Rictor (1G11) is recommended for detection of Rictor of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for Rictor siRNA (h): sc-61478, Rictor siRNA (m): sc-61479, Rictor siRNA (r): sc-270141, Rictor shRNA Plasmid (h): sc-61478-SH, Rictor shRNA Plasmid (m): sc-61479-SH, Rictor shRNA Plasmid (r): sc-270141-SH, Rictor shRNA (h) Lentiviral Particles: sc-61478-V, Rictor shRNA (m) Lentiviral Particles: sc-61479-V and Rictor shRNA (r) Lentiviral Particles: sc-270141-V.

Molecular Weight of Rictor: 200 kDa.

Positive Controls: Ramos cell lysate: sc-2216, Hep G2 cell lysate: sc-2227 or SH-SY5Y cell lysate: sc-3812.

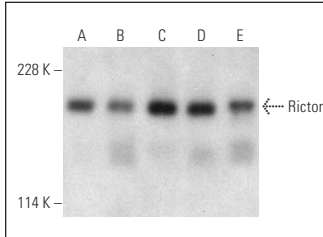
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

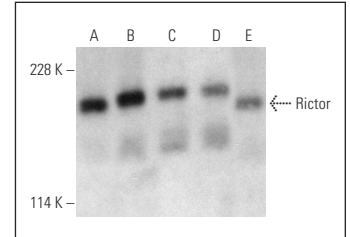
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



Rictor (1G11): sc-81538. Western blot analysis of Rictor expression in Ramos (A), Hep G2 (B), SH-SY5Y (C), HeLa (D) and SK-BR-3 (E) whole cell lysates.



Rictor (1G11): sc-81538. Western blot analysis of Rictor expression in NAMALWA (A), NIH/3T3 (B), Neuro-2A (C) and PC-12 (D) whole cell lysates and human adrenal gland tissue extract (E).

## SELECT PRODUCT CITATIONS

1. Chin, T.Y., et al. 2010. Inhibition of the mammalian target of rapamycin promotes cyclic AMP-induced differentiation of NG108-15 cells. *Autophagy* 6: 1139-1156.
2. Inuzuka, H., et al. 2011. SCF<sup>FBW7</sup> regulates cellular apoptosis by targeting MCL1 for ubiquitylation and destruction. *Nature* 471: 104-109.
3. Misra, U.K. and Pizzo, S.V. 2013. Evidence for a pro-proliferative feedback loop in prostate cancer: the role of Epac1 and Cox-2-dependent pathways. *PLoS ONE* 8: e63150.
4. Pan, S.J., et al. 2015. Tetraspanin 8-rictor-integrin  $\alpha$ 3 complex is required for glioma cell migration. *Int. J. Mol. Sci.* 16: 5363-5374.
5. Qin, B., et al. 2018. MicroRNA-142-3p induces atherosclerosis-associated endothelial cell apoptosis by directly targeting Rictor. *Cell. Physiol. Biochem.* 47: 1589-1603.
6. Lee, M.K., et al. 2018. *Pyropia yezoensis* protein supplementation prevents dexamethasone-induced muscle atrophy in C57BL/6 mice. *Mar. Drugs* 16: 328.
7. Lee, M.K., et al. 2019. Protective effect of *Pyropia yezoensis* peptide on dexamethasone-induced myotube atrophy in C2C12 myotubes. *Mar. Drugs* 17: 284.
8. Zhou, H., et al. 2022. Epithelial-mesenchymal reprogramming by KLF4-regulated Rictor expression contributes to metastasis of non-small cell lung cancer cells. *Int. J. Biol. Sci.* 18: 4869-4883.
9. Zhuang, L., et al. 2022. TSPAN8 alleviates high glucose-induced apoptosis and autophagy via targeting mTORC2. *Cell Biol. Int.* E-published.

## CONJUGATES

See **Rictor (H-11): sc-271081** for Rictor antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.