

# Protor-2 (S-15): sc-138544

## BACKGROUND

mTOR is a large protein kinase that is important in cell growth and functions as the mammalian target of rapamycin, an immunosuppressant that blocks vessel restenosis and also has potential anticancer applications. Rapamycin-insensitive companion of mTOR, also designated Rictor, forms a complex (designated mTORC2) with mTOR that directly phosphorylates Akt/PKB on Ser 473 and plays a key role in growth signaling pathways. Protor-2, also known as PROTOR2 or FLJ14213, is a 368 amino acid protein that is thought to interact with the mTORC2 complex and, via this interaction, may regulate organization of the actin cytoskeleton. Three isoforms of Protor-2 are expressed due to alternative splicing events.

## REFERENCES

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2. Beausoleil, S.A., et al. 2004. Large-scale characterization of HeLa cell nuclear phosphoproteins. *Proc. Natl. Acad. Sci. USA* 101: 12130-12135.
3. Jacinto, E., et al. 2004. Mammalian TOR complex 2 controls the Actin cytoskeleton and is Rapamycin insensitive. *Nat. Cell. Biol.* 6: 1122-1128.
4. Sarbassov, D.D., et al. 2004. Rictor, a novel binding partner of mTOR, defines a Rapamycin-insensitive and Raptor-independent pathway that regulates the cytoskeleton. *Curr. Biol.* 14: 1296-1302.
5. Ali, S.M., et al. 2005. Structure of S6 kinase 1 determines whether Raptor-mTOR or Rictor-mTOR phosphorylates its hydrophobic motif site. *J. Biol. Chem.* 280: 19445-19448.
6. Hresko, R.C., et al. 2005. mTOR Rictor is the Ser 473 kinase for Akt/protein kinase B in 3T3-L1 adipocytes. *J. Biol. Chem.* 280: 40406-40416.
7. Sarbassov, D.D., et al. 2005. Phosphorylation and regulation of Akt/PKB by the Rictor-mTOR complex. *Science* 307: 1098-1101.

## CHROMOSOMAL LOCATION

Genetic locus: PRR5L (human) mapping to 11p13; Prr5l (mouse) mapping to 2 E2.

## SOURCE

Protor-2 (S-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of Protor-2 of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-138544 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

Protor-2 (S-15) is recommended for detection of Protor-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Protor-2 (S-15) is also recommended for detection of Protor-2 in additional species, including equine and porcine.

Suitable for use as control antibody for Protor-2 siRNA (h): sc-96853, Protor-2 siRNA (m): sc-152488, Protor-2 shRNA Plasmid (h): sc-96853-SH, Protor-2 shRNA Plasmid (m): sc-152488-SH, Protor-2 shRNA (h) Lentiviral Particles: sc-96853-V and Protor-2 shRNA (m) Lentiviral Particles: sc-152488-V.

Molecular Weight of Protor-2: 41 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.