SANTA CRUZ BIOTECHNOLOGY, INC.

Protor-2 (B-19): sc-101956

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 Ser473 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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3. Beausoleil, S.A., et al. 2004. Large-scale characterization of HeLa cell nuclear phosphoproteins. Proc. Natl. Acad. Sci. USA 101: 12130-12135.
4. Jacinto, E., et al. 2004. Mammalian TOR complex 2 controls the Actin cytoskeleton and is Rapamycin insensitive. Nat. Cell Biol. 6: 1122-1128.
5. 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.
6. 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.
7. Hresko, R.C., et al. 2005. mTOR (Rictor) is the Ser473 kinase for Akt/protein kinase B in 3T3-L1 adipocytes. J. Biol. Chem. 280: 40406-40416.
8. Sarbassov, D.D., et al. 2005. Phosphorylation and regulation of Akt/PKB by the Rictor-mTOR complex. Science 307: 1098-1101.
9. Pearce, L.R., et al. 2007. Identification of Protor as a novel Rictor-binding component of mTOR complex-2. Biochem. J. 405: 513-522.

CHROMOSOMAL LOCATION

Genetic locus: FLJ14213 (human) mapping to 11p13; 2600010E01Rik (mouse) mapping to 2 E2.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

SOURCE

Protor-2 (B-19) is a purified rabbit polyclonal antibody raised against Protor-2 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

Protor-2 (B-19) is recommended for detection of Protor-2 of mouse, rat, human and dog origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

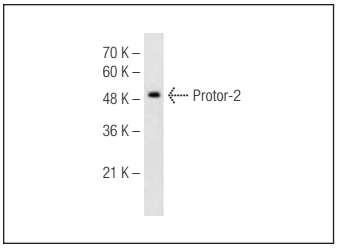
Molecular Weight of Protor-2: 41 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Protor-2 (B-19): sc-101956. Western blot analysis of Protor-2 expression in Jurkat whole cell lysate.

RESEARCH USE

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