SANTA CRUZ BIOTECHNOLOGY, INC.

PRR5 (A-7): sc-390469

BACKGROUND

Proline-rich proteins are often involved in protein-protein interactions and typically act as ligands for SH3, WW and EVH1 domains. PRR5 (proline-rich protein 5), also known as protein observed with Rictor-1 (Protor-1), is a 388 amino acid protein that is a subunit of mammalian target of rapamycin complex 2 (mTORC2), a multimeric kinase that is involved in the regulation of the actin cytoskeleton and phosphorylates Akt1, SGK and PKC α. Other proteins that make up mTORC2 include Rictor, MAPKAP-1, FRAP and LST8. PRR5 plays an important role in the modulation of platelet-derived growth factor signaling and in the regulation of PDGFR-β expression. Since the gene encoding PRR5 is located in a region that frequently undergoes loss of heterozygosity in breast cancer, it is likely that PRR5 is a tumor suppressor. There are four isoforms of PRR5 that are produced as a result of alternative splicing events.

REFERENCES

1. Johnstone, C.N., et al. 2005. PRR5 encodes a conserved proline-rich protein predominant in kidney: analysis of genomic organization, expression, and mutation status in breast and colorectal carcinomas. Genomics 85: 338-351.
2. Pearce, L.R., et al. 2007. Identification of Protor as a novel Rictor-binding component of mTOR complex-2. Biochem. J. 405: 513-522.
3. Woo, S.Y., et al. 2007. PRR5, a novel component of mTOR complex 2, regulates platelet-derived growth factor receptor β expression and signaling. J. Biol. Chem. 282: 25604-25612.
4. Thedieck, K., et al. 2007. PRAS40 and PRR5-like protein are new mTOR interactors that regulate apoptosis. PLoS ONE 2: e1217.

CHROMOSOMAL LOCATION

Genetic locus: PRR5 (human) mapping to 22q13.31; Prr5 (mouse) mapping to 15 E2.

SOURCE

PRR5 (A-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 253-270 within an internal region of PRR5 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PRR5 (A-7) is available conjugated to agarose (sc-390469 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390469 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390469 PE), fluorescein (sc-390469 FITC), Alexa Fluor® 488 (sc-390469 AF488), Alexa Fluor® 546 (sc-390469 AF546), Alexa Fluor® 594 (sc-390469 AF594) or Alexa Fluor® 647 (sc-390469 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390469 AF680) or Alexa Fluor® 790 (sc-390469 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390469 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

PRR5 (A-7) is recommended for detection of PRR5 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PRR5 siRNA (h): sc-76261, PRR5 siRNA (m): sc-152512, PRR5 shRNA Plasmid (h): sc-76261-SH, PRR5 shRNA Plasmid (m): sc-152512-SH, PRR5 shRNA (h) Lentiviral Particles: sc-76261-V and PRR5 shRNA (m) Lentiviral Particles: sc-152512-V.

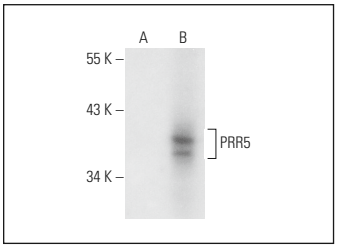
Molecular Weight of PRR5 isoforms: 33-43 kDa.

Positive Controls: PRR5 (h): 293T Lysate: sc-112138.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



PRR5 (A-7): sc-390469. Western blot analysis of PRR5 expression in non-transfected: sc-117752 (**A**) and human PRR5 transfected: sc-112138 (**B**) 293T whole cell lysates.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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