SANTA CRUZ BIOTECHNOLOGY, INC.

PRKCDBP (8D3): sc-293329

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The Power to Question

BACKGROUND

PRKCDBP (protein kinase C, δ binding protein), also known as SRBC, HSRBC or cavin-3, is a 261 amino acid protein belonging to the STICK (substrates that interact with C-kinase) superfamily of PKC-binding proteins that is strongly expressed in mammary and epithelial cells. PRKCDBP interacts with PRKCD and phosphatidylserine. It is suggested that phosphatidylserine may stabilize the binding between PKC and PKC-binding partners by forming a bridge. Considered a novel tumor suppressor, PRKCDBP is downregulated in breast and lung cancer cell lines and is inactivated by methylation. PRKCDBP may have an immune potentiation function and may act as a caveolin adapter that regulates caveolae function. NK-1R (neurokinin 1 receptor), a G protein-coupled receptor found in human glioblastomas is known to stimulate the phosphorylation of PRKCDBP.

REFERENCES

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2. Xu, X.L., et al. 2001. Inactivation of human SRBC, located within the 11p15.5-p15.4 tumor suppressor region, in breast and lung cancers. Cancer Res. 61: 7943-7949.
3. Bhattacharjee, M., et al. 2004. Differential regulation of the protein tyrosine kinase activity following interleukin-2 (IL-2), interferron γ (IFN-γ) and SRBC administration in brain tumor-induced conditions: SRBC acting as a dual potentiator in regulating the cytokine profile. Cancer Biol. Ther. 3: 755-760.
4. Yamaguchi, K., et al. 2005. Signal transduction through substance P receptor in human glioblastoma cells: roles for Src and PKC δ. Cancer Chemother. Pharmacol. 56: 585-593.
5. Zöchbauer-Müller, S., et al. 2005. Expression of the candidate tumor suppressor gene hSRBC is frequently lost in primary lung cancers with and without DNA methylation. Oncogene 24: 6249-6255.
6. Fukasawa, M., et al. 2006. Microarray analysis of promoter methylation in lung cancers. J. Hum. Genet. 51: 368-374.
7. Lee, J.H., et al. 2008. Frequent epigenetic inactivation of hSRBC in gastric cancer and its implication in attenuated p53 response to stresses. Int. J. Cancer 122: 1573-1584.
8. McMahon, K.A., et al. 2009. SRBC/cavin-3 is a caveolin adapter protein that regulates caveolae function. EMBO J. 28: 1001-1015.
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CHROMOSOMAL LOCATION

Genetic locus: PRKCDBP (human) mapping to 11p15.4.

SOURCE

PRKCDBP (8D3) is a mouse monoclonal antibody raised against amino acids 161-261 of PRKCDBP of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PRKCDBP (8D3) is recommended for detection of PRKCDBP of human 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 PRKCDBP siRNA (h): sc-96852, PRKCDBP shRNA Plasmid (h): sc-96852-SH and PRKCDBP shRNA (h) Lentiviral Particles: sc-96852-V.

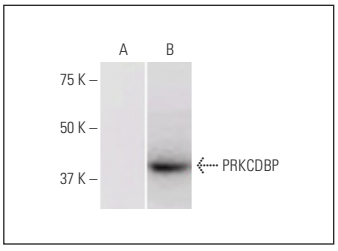
Molecular Weight of PRKCDBP: 27 kDa.

Positive Controls: PRKCDBP transfected 293T whole cell lysate.

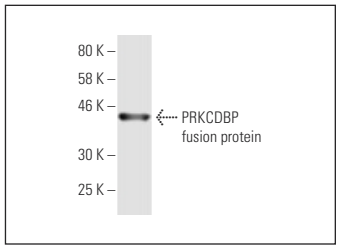
RECOMMENDED SUPPORT REAGENTS

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).

DATA



PRKCDBP (8D3): sc-293329. Western blot analysis of PRKCDBP expression in non-transfected (**A**) and PRKCDBP transfected (**B**) 293T whole cell lysates.



PRKCDBP (8D3): sc-293329. Western blot analysis of human recombinant PRKCDBP fusion protein.

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.