

RCAN1/Dscr1 (a.a. 132-140)

Cat. # RP3961

Host Rabbit Polyclonal

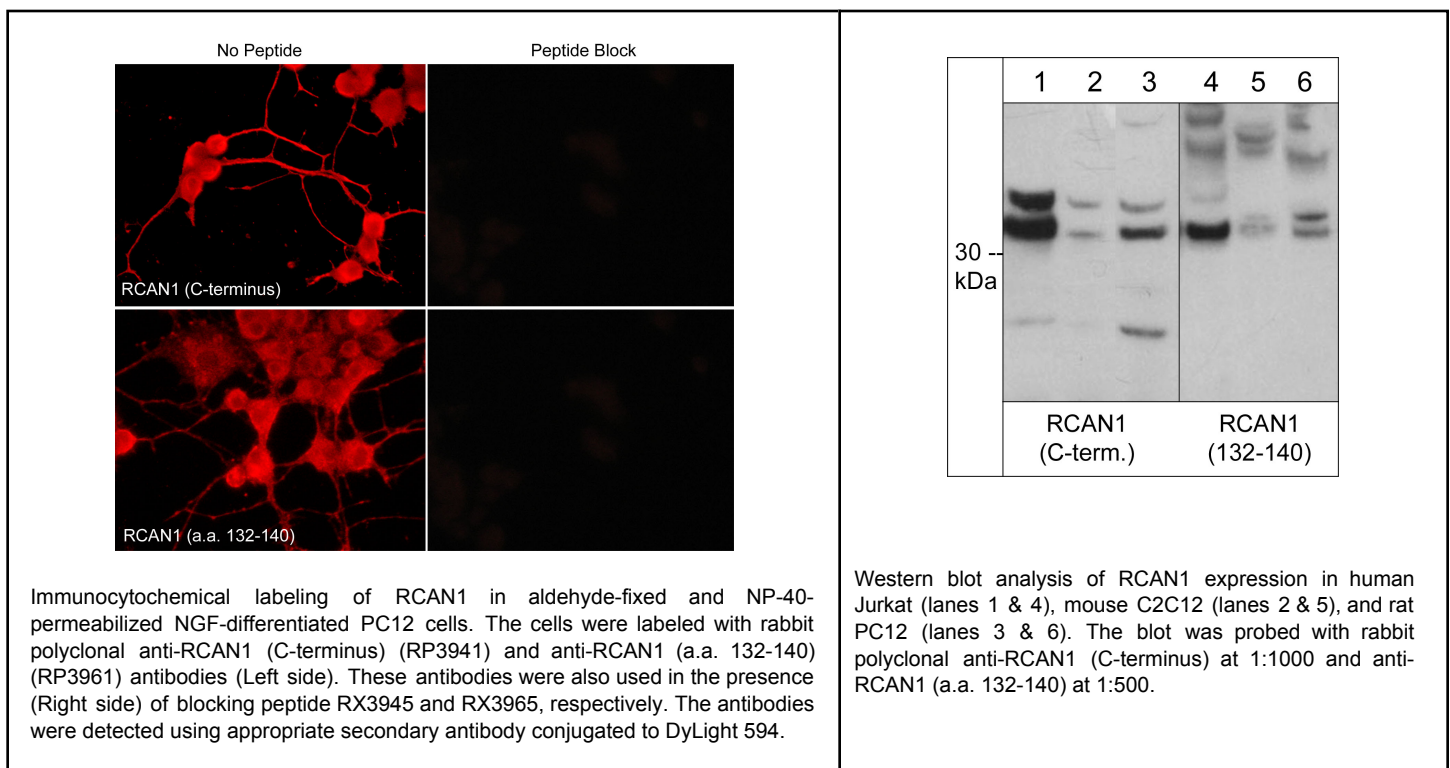
Size 100 µl

Background:

An important element of calcium signaling pathways involves calmodulin activation of calcineurin (phosphatase PP2B), leading to dephosphorylation of transcription factors such as NFAT and MEF2. A wide variety of proteins other than calmodulin have also been implicated in regulating calcineurin activity. Regulators of Calcineurin (RCANs) include RCAN1, RCAN2, and RCAN3. RCAN1 has previously been referred to as Down's syndrome candidate region-1 (Dscr1), MCIP, calcipressin, and Adapt78. This RCAN is expressed as several different variants with RCAN1L (38 kDa) and RCAN1S (31 kDa) being most prevalent. RCAN1 is increased in Down's syndrome tissues and in a mouse model of Down's syndrome. Increased expression of RCAN1 leads to significant suppression of tumor growth in mice as result of deficits in calcineurin-induced tumor angiogenesis. RCAN1 can recruit TAB1, TAK1, and calcineurin into a macromolecular signaling complex, and TAK1 can phosphorylate Ser-94 and Ser-136 in RCAN1S. This phosphorylation converts RCAN1 from an inhibitor to a facilitator of calcineurin-NFAT signaling.

References

- Liu, Q. et al. (2009) Nat Cell Biol. 11:154.
 Baek, K.H. et al. (2009) Nature. 459(7250):1126.
 Genesca, L. et al. (2003) Biochem J. 374:567.



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Immunogen:

RCAN1 synthetic peptide (coupled to carrier protein) corresponds to amino acids 132 to 140 in human RCAN1S (isoform 2). This sequence is highly conserved in rat and mouse RCAN1, and this sequence is found in all four isoforms of RCAN1. In addition, this sequence has significant homology to RCAN2 and RCAN3.

Buffer and Storage:

Rabbit polyclonal, affinity-purified antibody is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C. Do not aliquot. Stable for 1 year.

Applications:

WB 1:1000

ELISA 1:2000

ICC 1:300

End user should determine optimal dilution for their particular applications and experiments.
Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1hour at room temperature.

Specificity:

The antibody detects several isoforms of RCAN1 on SDS-PAGE immunoblots of mouse C2C12, rat PC12, and human Jurkat cells. The predominate isoform detected is the 38 kDa RCAN1L, but the antibody may also detect RCAN2 and RCAN3.

*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

Related Products:

RP3941 RCAN1/Dscr1 (C-terminus) Rabbit Polyclonal
RX3945 RCAN1/Dscr1 (C-terminus) Peptide
RX3965 RCAN1/Dscr1 (a.a. 132-140) Peptide
CM2991 CaM Kinase IV (N-terminal region) Mouse Monoclonal
MK6050 MAP Kinase Activation Antibody Sampler Kit
JL9401 Jurkat Pervanadate Control Lysate

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