

RCAN1/Dscr1 (C-terminus)

Cat. # RP3941

Host Rabbit Polyclonal

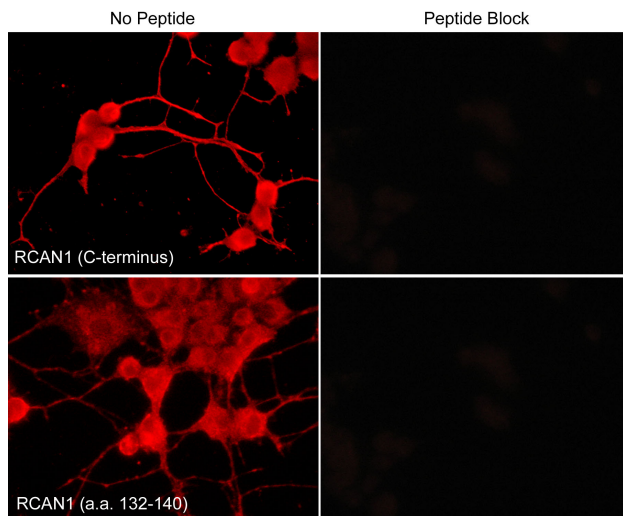
Size 100 μ l

Background:

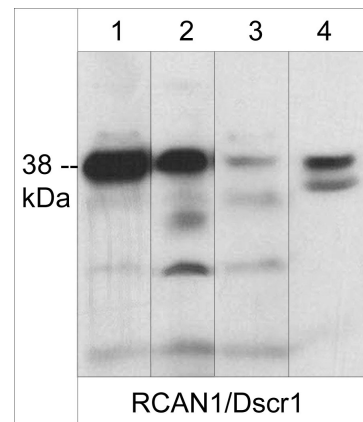
An important element of calcium signaling pathways involves calmodulin activation of calcineurin (phosphatase PP2B), leading to dephosphorylation of transcription factors such as NFAT and MEF2. A wide variety of proteins other than calmodulin have also been implicated in regulating calcineurin activity. 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. (Background)
 Baek, K.H. et al. (2009) *Nature.* 459(7250):1126. (Background)
 Genesca, L. et al. (2003) *Biochem J.* 374:567. (Background)
 Kim, S.S. & Seo, S.R. (2011) *J Biol Chem.* 286(43):37841. (WB: rat PC12 cells, shRNA)



Immunocytochemical labeling of RCAN1 in aldehyde-fixed and NP-40-permeabilized NGF-differentiated PC12 cells. The cells were labeled with rabbit polyclonal anti-RCAN1 (C-terminus) (RP3941) and anti-RCAN1 (a.a. 132-140) (RP3961) antibodies (Left side). These antibodies were also used in the presence (Right side) of blocking peptide RX3945 and RX3965, respectively. The antibodies were detected using appropriate secondary antibody conjugated to DyLight 594.



Western blot analysis of RCAN1 expression in human Jurkat (lane 1), rat PC12 (lane 2), human A431 (lane 3), and adult mouse muscle (lane 4). The blot was probed with rabbit polyclonal anti-RCAN1 (C-terminus) at 1:1000.

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RCAN1/Dscr1 (C-terminus)

Cat. # RP3941

Host Rabbit Polyclonal

Size 100 µl

Immunogen:

RCAN1 (C-terminus) synthetic peptide (coupled to carrier protein) corresponds to amino acids in the C-terminus of human RCAN1. This sequence is highly conserved in rat and mouse RCAN1, and this sequence is found in all four isoforms of RCAN1, but is not found in RCAN2 or 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 1:100

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 adult mouse muscle and brain, rat PC12 cells, and human A431 and Jurkat cells. The predominate isoforms detected were the 38 kDa RCAN1L and 31 kDa RCAN1S.

*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:

RP3961 RCAN1/Dscr1 (a.a. 132-140) 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
PL7091 PC12 Control Lysate

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