

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

Cat. # RX3965

Size 50 µg

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.

Peptide Sequence:

RCAN1 synthetic peptide corresponding 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:

Blocking peptide is supplied in 50µl phosphate-buffered saline and 0.05% sodium azide.
Store at -20°C. Stable for 1 year.

Applications:

Blocking 1:1000
ELISA 50 ng/well

End user should determine optimal concentration dependent on the concentration of the antibody.
Recommended for blocking antibody reactivity in Western blot and immunocytochemistry.
ELISA established in 96-well Nunc immunoplates where peptide was bound to plates for 2 hrs in 0.1 M sodium carbonate buffer, pH 8.5.

Specificity:

The peptide is specifically recognized by anti-RCAN1 (a. a. 132-140) antibody (RP3961) in ELISA, and has been shown to block the reactivity of RP3961 during Western blot. In addition, the peptide is recommended for use in blocking RP3961 reactivity in immunocytochemistry.

Related Products:

RP3961 RCAN1/Dscr1 (a.a. 132-140) Rabbit Polyclonal
RP3941 RCAN1/Dscr1 (C-terminus) Rabbit Polyclonal
RX3945 RCAN1/Dscr1 (C-terminus) Peptide
MK6170 Muscle Atrophy Ubiquitin Ligase Antibody Sampler Kit
MK6050 MAP Kinase Activation Antibody Sampler Kit
AK6060 Actin & Tubulin Antibody Sampler Kit

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