

RCAN2 Antibody

Catalog # ASC10857

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9JHG2
Other Accession	AAH62141 , 38328420
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	22025
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	RCAN2 antibody can be used for detection of RCAN2 by Western blot at 1 - 2 μ g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 μ g/mL. For immunofluorescence start at 20 μ g/mL.

Additional Information

Gene ID	53901
Other Names	Calcipressin-2, Calcineurin inhibitory protein ZAKI-4, Down syndrome candidate region 1-like protein 1, Myocyte-enriched calcineurin-interacting protein 2, MCIP2, Regulator of calcineurin 2, Rcan2, Dscr1l1, Zaki4
Target/Specificity	Rcan2;
Reconstitution & Storage	RCAN2 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	RCAN2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Rcan2
Synonyms	Dscr1l1, Zaki4
Function	Inhibits calcineurin-dependent transcriptional responses by binding to the catalytic domain of calcineurin A. Could play a role during central nervous system development.
Tissue Location	Highest expression in heart, skeletal muscle and brain. Lower expression in all other tissues

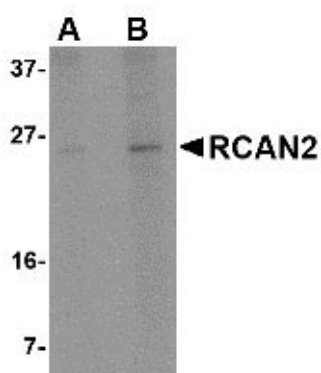
Background

RCAN2 Antibody: Regulator of calcineurin 2 (RCAN2), also known as ZAKI4 and DSCR1L1, is expressed as two isoforms differing at their N-terminus. The longer of the two (isoform 1) is expressed exclusively in the brain, while isoform 2 is ubiquitously expressed, with highest expression in brain, heart, and muscle. Both isoforms bind to the catalytic subunit of calcineurin, a Ca^{++} -dependent protein phosphatase involved in several neuronal functions, though their C-terminal region and inhibit calcineurin's activity. Unlike isoform 1 of RCAN2, the expression of the second isoform is not induced by the thyroid hormone T3. RCAN2 is a member of a family of three endogenous calcineurin regulators that are located near the minimal supernumerary fragment of chromosome 21 in individuals with Down syndrome, suggesting that they play a role in this syndrome. Multiple isoforms of RCAN2 are known to exist.

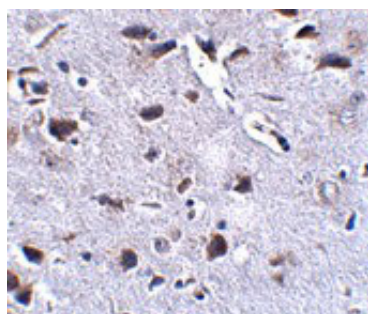
References

Miyazaki T, Kanou Y, Murata Y, et al. Molecular cloning of a novel thyroid hormone-responsive gene, ZAKI-4, in human skin fibroblasts. *J. Biol. Chem.*1996; 271:14567-71.
Rothermel B, Vega RB, Yang J, et al. A protein encoded within the Down syndrome critical region is enriched in striated muscles and inhibits calcineurin signaling. *J. Biol. Chem.*2000; 275:8719-25.
Cao X, Kambe F, Miyazaki Y, et al. Novel human ZAKI-4 isoforms: hormonal and tissue-specific regulation and function as calcineurin inhibitors. *Biochem. J.*2002; 367:459-66.
Fuentes JJ, Genesca L, Kingsbury TJ, et al. DSCR1, overexpressed in Down syndrome, is an inhibitor of calcineurin-mediated signaling pathways. *Hum. Mol. Genet.*2000; 9:1681-90.

Images

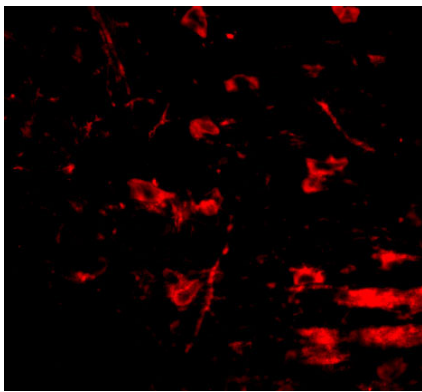


Western blot analysis of RCAN2 in 3T3 cell lysate with RCAN2 antibody at (A) 1 and (B) 2 $\mu\text{g/mL}$.



Immunohistochemistry of RCAN2 in mouse brain tissue with RCAN2 antibody at 2.5 $\mu\text{g/mL}$.

Immunofluorescence of RCAN2 in mouse brain tissue with RCAN2 antibody at 20 $\mu\text{g/mL}$.



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.