

# DSCR 1 (FL-197): sc-66864

## BACKGROUND

DSCR1 (Down syndrome critical region 1), also known as Calcipressin-1, Adapt78, MCIP1 (myocyte-enriched calcineurin-interacting protein 1) or regulator of calcineurin 1, is a 252 amino acid protein that belongs to the RCAN family and exists as 4 alternatively spliced isoforms. Abundantly expressed in skeletal muscle, brain and heart, DSCR 1 is thought to influence cardiac and nervous system development. Overexpression of DSCR1 may play a role in the pathogenesis of Down syndrome. DSCR1 interacts with Raf-1 and has been observed to inhibit calcineurin-dependent transcriptional responses by binding to the catalytic domain of calcineurin A. The gene encoding DSCR 1 maps to human chromosome 21, which houses approximately 300 genes and comprises nearly 1.5% of the human genome. Chromosome 21-associated disorders include Alzheimer's disease, amyotrophic lateral sclerosis and, most notably, Down syndrome (also known as trisomy 21).

## REFERENCES

1. Fuentes, J.J., et al. 1995. A new human gene from the Down syndrome critical region encodes a proline-rich protein highly expressed in fetal brain and heart. *Hum. Mol. Genet.* 4: 1935-1944.
2. Fuentes, J.J., et al. 1997. Genomic organization, alternative splicing, and expression patterns of the DSCR1 (down syndrome candidate region 1) gene. *Genomics* 44: 358-361.
3. Fuentes, J.J., et al. 2000. DSCR1, overexpressed in Down syndrome, is an inhibitor of calcineurin-mediated signaling pathways. *Hum. Mol. Genet.* 9: 1681-1690.
4. Casas, C., et al. 2001. Dscr1, a novel endogenous inhibitor of calcineurin signaling, is expressed in the primitive ventricle of the heart and during neurogenesis. *Mech. Dev.* 101: 289-292.

## CHROMOSOMAL LOCATION

Genetic locus: DSCR1 (human) mapping to 21q22.12; Dscr1 (mouse) mapping to 16 C4.

## SOURCE

DSCR 1 (FL-197) is a rabbit polyclonal antibody raised against amino acids 1-197 representing full length DSCR 1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

DSCR 1 (FL-197) is recommended for detection of DSCR 1 of mouse, rat and 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with RCAN2 or Calcipressin-3.

DSCR 1 (FL-197) is also recommended for detection of DSCR 1 in additional species, including canine and avian.

Suitable for use as control antibody for DSCR 1 siRNA (h): sc-45480, DSCR 1 siRNA (m): sc-45481, DSCR 1 shRNA Plasmid (h): sc-45480-SH, DSCR 1 shRNA Plasmid (m): sc-45481-SH, DSCR 1 shRNA (h) Lentiviral Particles: sc-45480-V and DSCR 1 shRNA (m) Lentiviral Particles: sc-45481-V.

Molecular Weight of DSCR 1: 28 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

1. Liu, Q., et al. 2009. Interaction between TAK1-TAB1-TAB2 and RCAN1-calcineurin defines a signalling nodal control point. *Nat. Cell Biol.* 11: 154-161.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **DSCR 1 (G-2): sc-377507** or **DSCR 1 (34-A): sc-130370**, our highly recommended monoclonal alternatives to DSCR 1 (FL-197).