SANTA CRUZ BIOTECHNOLOGY, INC.

CANT1 (D-16): sc-163970

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CANT1 (calcium activated nucleotidase 1), also known as apyrase homolog, DBQD, SCAN1 (soluble calcium-activated nucleotidase 1) or SHAPY, is a 401 amino acid single-pass type II membrane protein of the endoplasmic reticulum and Golgi apparatus. A member of the apyrase family, CANT1 functions as a calcium-dependent nucleotidase that preferentially binds UDP. CANT1 is expressed at highest levels in testis, placenta, prostate and small intestine, and undergoes post-translational N-glycosylation and alternative splicing events to produce two isoforms. Homozygous mutation in the gene encoding CANT1 is the cause of Desbuquois dysplasia, an autosomal recessive chondrodysplasia in which extreme prenatal and postnatal growth retardation is observed.

REFERENCES

1. Faivre, L., et al. 2004. Clinical and genetic heterogeneity in Desbuquois dysplasia. Am. J. Med. Genet. A 128A: 29-32.
2. Yang, M., et al. 2004. Site-directed mutagenesis of human soluble calcium-activated nucleotidase 1 (hSCAN-1): identification of residues essential for enzyme activity and the Ca^{2+}-induced conformational change. Biochemistry 43: 9185-9194.
3. Yang, M., et al. 2008. Characterization and importance of the dimer interface of human calcium-activated nucleotidase. Biochemistry 47: 771-778.
4. Hermans, K.G., et al. 2008. Two unique novel prostate-specific and androgen-regulated fusion partners of ETV4 in prostate cancer. Cancer Res. 68 3094-3098.
5. Yang, M., et al. 2008. Engineered human soluble calcium-activated nucleotidase inhibits coagulation *in vitro* and thrombosis *in vivo*. Thromb. Res. 122: 541-548.
6. Huber, C., et al. 2009. Identification of CANT1 mutations in Desbuquois dysplasia. Am. J. Hum. Genet. 85: 706-710.
7. Online Mendelian Inheritance in Man, OMIM™. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 613165. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: CANT1 (human) mapping to 17q25.3; Cant1 (mouse) mapping to 11 E2.

SOURCE

CANT1 (D-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CANT1 of human origin.

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 or our catalog for detailed protocols and support products.

PRODUCT

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

Blocking peptide available for competition studies, sc-163970 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CANT1 (D-16) is recommended for detection of CANT1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

CANT1 (D-16) is also recommended for detection of CANT1 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for CANT1 siRNA (h): sc-94075, CANT1 siRNA (m): sc-141999, CANT1 shRNA Plasmid (h): sc-94075-SH, CANT1 shRNA Plasmid (m): sc-141999-SH, CANT1 shRNA (h) Lentiviral Particles: sc-94075-V and CANT1 shRNA (m) Lentiviral Particles: sc-141999-V.

Molecular Weight of CANT1: 45 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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