

CANT1 (B-12): sc-515315

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., Le Merrer, M., Zerres, K., Ben Hariz, M., Scheffer, D., Young, I.D., Maroteaux, P., Munnich, A. and Cormier-Daire, V. 2004. Clinical and genetic heterogeneity in Desbuquois dysplasia. *Am. J. Med. Genet. A* 128A: 29-32.
2. Yang, M. and Kirley, T.L. 2004. Site-directed mutagenesis of human soluble calcium-activated nucleotidase 1 (hSCAN-1): identification of residues essential for enzyme activity and the Ca²⁺-induced conformational change. *Biochemistry* 43: 9185-9194.
3. Yang, M., Horii, K., Herr, A.B. and Kirley, T.L. 2008. Characterization and importance of the dimer interface of human calcium-activated nucleotidase. *Biochemistry* 47: 771-778.
4. Hermans, K.G., Bressers, A.A., van der Korput, H.A., Dits, N.F., Jenster, G. and Trapman, J. 2008. Two unique novel prostate-specific and androgen-regulated fusion partners of ETV4 in prostate cancer. *Cancer Res.* 68: 3094-3098.
5. Yang, M. and Kirley, T.L. 2008. Engineered human soluble calcium-activated nucleotidase inhibits coagulation *in vitro* and thrombosis *in vivo*. *Thromb. Res.* 122: 541-548.

CHROMOSOMAL LOCATION

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

SOURCE

CANT1 (B-12) is a mouse monoclonal antibody raised against amino acids 145-233 mapping within an internal region of CANT1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain 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.

APPLICATIONS

CANT1 (B-12) is recommended for detection of CANT1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

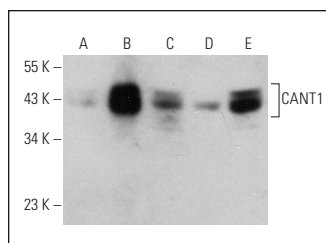
Molecular Weight of CANT1 isoform 1/2: 45/28 kDa.

Positive Controls: CANT1 (h2): 293T Lysate: sc-117116, A-431 whole cell lysate: sc-2201 or Jurkat whole cell lysate: sc-2204.

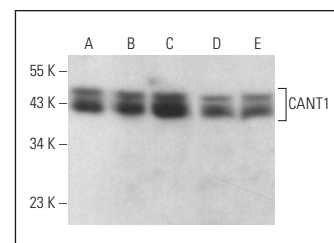
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CANT1 (B-12): sc-515315. Western blot analysis of CANT1 expression in non-transfected 293T: sc-117752 (A), human CANT1 transfected 293T: sc-117116 (B), A-431 (C), Jurkat (D) and WiDr (E) whole cell lysates.



CANT1 (B-12): sc-515315. Western blot analysis of CANT1 expression in EOC 20 (A), Neuro-2A (B), SH-SY5Y (C), C6 (D) and AMJ2-C8 (E) whole cell lysates.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.