SANTA CRUZ BIOTECHNOLOGY, INC.

Codanin-1 (C-18): sc-67531

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The congenital dyserythropoietic anemias (CDAs) are an uncommon and heterogeneous group of disorders characterized by markedly ineffective erythropoiesis and, usually, striking dysplastic changes in erythroblasts. Congenital dyserythropoietic anemia type 1 (CDA1) is a rare autosomal recessive disorder with ineffective erythropoiesis, characteristic morphological abnormalities of erythroblasts, and iron overloading. CDA1 is caused by mutations in the CDAN1 gene, which maps to chromosome 15q15.2 and encodes the 1,227 amino acid protein Codanin-1. Codanin-1 has a 150-residue N-terminal domain with sequence similarity to collagens and two shorter segments that show weak similarities to the microtubule-associated proteins, MAP-1B (neuraxin) and synapsin. Findings indicate that Codanin-1 may be involved in nuclear envelope integrity, conceivably related to microtubule attachments. Skeletal anomalism has been associated with mutations of CDAN1 and indicate that Codanin-1 may play a role in the development of the skeleton.

REFERENCES

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2. Dgany, O., et al. 2002. Congenital dyserythropoietic anemia type 1 is caused by mutations in Codanin-1. Am. J. Hum. Genet. 71: 1467-1474.
3. Pielage, J., et al. 2003. The *Drosophila* cell survival gene discs lost encodes a cytoplasmic Codanin-1-like protein, not a homolog of tight junction PDZ protein Patj. Dev. Cell 5: 841-851.
4. Delaunay, J. 2003. Red cell membrane and erythropoiesis genetic defects. Hematol. J. 4: 225-232.
5. Heimpel, H., et al. 2005. Congenital dyserythropoietic anemia type 1 (CDA1): molecular genetics, clinical appearance, and prognosis based on long-term observation. Blood 107: 334-340.
6. Ahmed, M.R., et al. 2006. Evidence of genetic heterogeneity in congenital dyserythropoietic anaemia type I. Br. J. Haematol. 133: 444-445.
7. Ahmed, M.R., et al. 2006. Linkage and mutational analysis of the CDAN1 gene reveals genetic heterogeneity in congenital dyserythropoietic anemia type I. Blood 107: 4968-4969.
8. Goede, J.S., et al. 2006. Congenital dyserythropoietic anemia type 1 with bone abnormalities, mutations of the CDAN1 gene, and significant responsiveness to α-interferon therapy. Ann. Hematol. 85: 591-595.

CHROMOSOMAL LOCATION

Genetic locus: CDAN1 (human) mapping to 15q15.2.

SOURCE

Codanin-1 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Codanin-1 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.

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-67531 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Codanin-1 (C-18) is recommended for detection of Codanin-1 of 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).

Codanin-1 (C-18) is also recommended for detection of Codanin-1 in additional species, including bovine and porcine.

Suitable for use as control antibody for Codanin-1 siRNA (h): sc-62132, Codanin-1 shRNA Plasmid (h): sc-62132-SH and Codanin-1 shRNA (h) Lentiviral Particles: sc-62132-V.

Molecular Weight of Codanin-1: 134 kDa.

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.

PROTOCOLS

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