

# Codanin-1 (S-19): sc-67536

## BACKGROUND

The congenital dyserythropoietic anemias (CDAs) are an uncommon and heterogeneous group of disorders that are 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 2 shorter segments that show weak similarities to the microtubule-associated proteins synapsin and MAP-1B (neuraxin). Research indicates that Codanin-1 may be involved in nuclear envelope integrity, conceivably related to microtubule attachments. Skeletal anomalism has been associated with mutations of CDAN1, indicating that Codanin-1 may play a role in the development of the skeleton.

## REFERENCES

1. Tamary, H., et al. 1996. Clinical features and studies of erythropoiesis in Israeli Bedouins with congenital dyserythropoietic anemia type I. *Blood* 87: 1763-1770.
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.

## CHROMOSOMAL LOCATION

Genetic locus: CDAN1 (human) mapping to 15q15.2; Cdan1 (mouse) mapping to 2 E5.

## SOURCE

Codanin-1 (S-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Codanin-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.

Blocking peptide available for competition studies, sc-67536 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

Codanin-1 (S-19) is recommended for detection of Codanin-1 of mouse 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), immunohistochemistry (including paraffin-embedded sections) (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 (S-19) is also recommended for detection of Codanin-1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Codanin-1 siRNA (h): sc-62132, Codanin-1 siRNA (m): sc-62133, Codanin-1 shRNA Plasmid (h): sc-62132-SH, Codanin-1 shRNA Plasmid (m): sc-62133-SH, Codanin-1 shRNA (h) Lentiviral Particles: sc-62132-V and Codanin-1 shRNA (m) Lentiviral Particles: sc-62133-V.

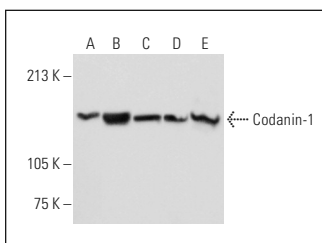
Molecular Weight of Codanin-1: 134 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

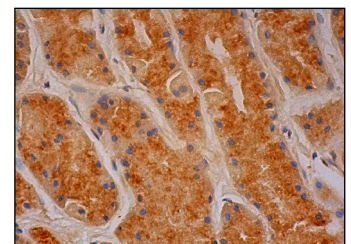
## RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



Codanin-1 (S-19): sc-67536. Western blot analysis of Codanin-1 expression in MIA PaCa-2 (A), HeLa (B), K-562 (C), Jurkat (D) and Hep G2 (E) whole cell lysates.



Codanin-1 (S-19): sc-67536. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing cytoplasmic staining of glandular cells.

## RESEARCH USE

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