SANTA CRUZ BIOTECHNOLOGY, INC.

Cdt2 (N-14): sc-79903

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The Power to Question

BACKGROUND

WD-repeats are motifs that are found in a variety of proteins and are characterized by a conserved core of 40-60 amino acids that commonly form a tertiary propeller structure. While proteins that contain WD-repeats participate in a wide range of cellular functions, they are generally involved in regulatory mechanisms concerning chromatin assembly, cell cycle control, signal transduction, RNA processing, apoptosis and vesicular trafficking. Cdt2, also known as DTL (denticleless homolog), CDW1, DCAF2, L2DTL or RAMP, is a 730 amino acid protein that localizes to both the cytoplasm and the nuclear membrane and contains 7 WD repeats. Expressed in testis, placenta, bone marrow, thymus and skeletal muscle, Cdt2 is required for DNA damage-induced Cdt1 proteolysis and is also thought to play an essential role in DNA replication and cell proliferation. Upon DNA damage, Cdt2 is subject to phosphorylation, probably by ATM or ATR. Two isoforms of Cdt2 exist due to alternative splicing events.

REFERENCES

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4. Sansam, C.L., et al. 2006. DTL/Cdt2 is essential for both Cdt1 regulation and the early G_2/M checkpoint. Genes Dev. 20: 3117-3129.
5. Jin, J., et al. 2006. A family of diverse CUL-4-DDB1-interacting proteins includes Cdt2, which is required for S phase destruction of the replication factor Cdt1. Mol. Cell 23: 709-721.
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7. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610617. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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CHROMOSOMAL LOCATION

Genetic locus: DTL (human) mapping to 1q32.3; Dtl (mouse) mapping to 1 H6.

SOURCE

Cdt2 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Cdt2 of human origin.

RESEARCH USE

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

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

APPLICATIONS

Cdt2 (N-14) is recommended for detection of Cdt2 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).

Cdt2 (N-14) is also recommended for detection of Cdt2 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for Cdt2 siRNA (h): sc-72852, Cdt2 siRNA (m): sc-72853, Cdt2 shRNA Plasmid (h): sc-72852-SH, Cdt2 shRNA Plasmid (m): sc-72853-SH, Cdt2 shRNA (h) Lentiviral Particles: sc-72852-V and Cdt2 shRNA (m) Lentiviral Particles: sc-72853-V.

Molecular Weight of Cdt2: 85 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.

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.