

DCTD (C-14): sc-161517



The Power to Question

BACKGROUND

DCTD (deoxycytidylate deaminase), also known as dCMP deaminase, is a 178 amino acid allosteric enzyme that exists as a homohexamer and belongs to the cytidine and deoxycytidylate deaminase protein family. Using zinc as a cofactor, DCTD catalyzes the deamination of dCMP to dUMP, thereby producing the nucleotide substrate (dUMP) that is used by thymidylate synthase (TS). TS uses 5,10-methyl-enetetrahydrofolate (methylene-THF) and dUMP in the synthesis of 2'-deoxythymidine-5'-monophosphate (dTMP), an essential precursor for DNA biosynthesis. Due to its role in the synthesis of dUMP, DCTD plays an important role in the creation of DNA. The activity of DCTD is regulated by the presence of dCTP and dTTP, two end products in the DCTD metabolic pathway. Multiple isoforms of DCTD are expressed due to alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: DCTD (human) mapping to 4q35.1; Dctd (mouse) mapping to 8 B1.2.

SOURCE

DCTD (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of DCTD 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-161517 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DCTD (C-14) is recommended for detection of DCTD 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).

DCTD (C-14) is also recommended for detection of DCTD in additional species, including canine and avian.

Suitable for use as control antibody for DCTD siRNA (h): sc-89286, DCTD siRNA (m): sc-142907, DCTD shRNA Plasmid (h): sc-89286-SH, DCTD shRNA Plasmid (m): sc-142907-SH, DCTD shRNA (h) Lentiviral Particles: sc-89286-V and DCTD shRNA (m) Lentiviral Particles: sc-142907-V.

Molecular Weight of DCTD: 20 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.

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.