SANTA CRUZ BIOTECHNOLOGY, INC.

CIDE-B (E-19): sc-8733

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The DNA fragmentation factor (DFF) is involved in the caspase-3 apoptotic pathway. DFF is composed of two subunits, a 45 kDa subunit called DFF-45 (also designated ICAD, for inhibitor of CAD), and CPAN (caspase-activated nuclease), also designated CAD (caspase-activated deoxyribonuclease). CPAN is a DNase that is responsible for DNA degradation during apoptosis. CPAN is inhibited by DFF-45. Caspase-3 acts to dissociate CPAN from DFF-45, allowing CPAN to enter the nucleus and degrade DNA. CIDE-A and CIDE-B have been identified as proteins that share homology with the N-terminal region of DFF-45. Like CPAN, CIDE-A and CIDE-B promote cell death and DNA fragmentation and are inhibited by DFF-45.

REFERENCES

1. Liu, X., et al. 1997. DFF, a heterodimeric protein that functions downstream of caspase-3 to trigger DNA fragmentation during apoptosis. Cell 89: 175-184.
2. Toh, S.Y., et al. 1998. Identification of the nuclear factor HMG2 as an activator for DFF nuclease activity. Biochem. Biophys. Res. Commun. 250: 598-601.
3. Enari, M., et al. 1998. A caspase-activated Dnase that degrades DNA during apoptosis. Nature 391: 43-50.
4. Halenbeck, R., et al. 1998. CPAN, a human nuclease regulated by the caspase-sensitive inhibitor DFF45. Curr. Biol. 8: 537-540.
5. Sakahira, H.,et al. 1998. Cleavage of CAD inhibitor in CAD activation and DNA degradation during apoptosis. Nature 391: 96-99.
6. Inohara, N., et al. 1998. CIDE, a novel family of cell death activators with homology to the 45 kDa subunit of the DNA fragmentation factor. EMBO J. 17: 2526-2533.
7. Inohara, N., et al. 1999. Identification of regulatory and catalytic domains in the apoptosis nuclease DFF40/CAD. J. Biol. Chem. 274: 270-274.

CHROMOSOMAL LOCATION

Genetic locus: Cideb (mouse) mapping to 14 C1.

SOURCE

CIDE-B (E-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of CIDE-B of mouse 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-8733 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

CIDE-B (E-19) is recommended for detection of CIDE-B of mouse and rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CIDE-B siRNA (m): sc-37442, CIDE-B shRNA Plasmid (m): sc-37442-SH and CIDE-B shRNA (m) Lentiviral Particles: sc-37442-V.

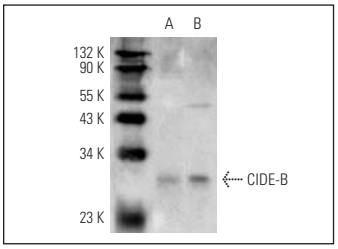
Molecular Weight of CIDE-B: 26 kDa.

Positive Controls: mouse heart extract: sc-2254 or mouse liver extract: sc-2256.

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.

DATA



CIDE-B (E-19): sc-8733. Western blot analysis of CIDE-B expression in mouse heart (**A**) and mouse liver (**B**) tissue extracts.

SELECT PRODUCT CITATIONS

1. Erdtmann, L., et al. 2003. The hepatitis C virus NS2 protein is an inhibitor of CIDE-B-induced apoptosis. J. Biol. Chem. 278: 18256-18264.
2. Yim, E.K., et al. 2004. Proteomic analysis of antiproliferative effects by treatment of 5-fluorouracil in cervical cancer cells. DNA Cell Biol. 23: 769-776.

RESEARCH USE

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