SANTA CRUZ BIOTECHNOLOGY, INC.

CIDE-B (5X): sc-101244

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, 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. 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.
2. Inohara, N., et al. 1999. Identification of regulatory and catalytic domains in the apoptosis nuclease DFF40/CAD. J. Biol. Chem. 274: 270-274.
3. 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.
4. Machado, J.G., et al. 2005. Gene expression profiling of jejunal Peyer's patches in juvenile and adult pigs. Mamm. Genome 16: 599-612.
5. Turpaev, K., et al. 2005. Analysis of differentially expressed genes in nitric oxide-exposed human monocytic cells. Free Radic. Biol. Med. 38: 1392-1400.
6. Novikova, S.I., et al. 2005. Cocaine-induced changes in the expression of apoptosis-related genes in the fetal mouse cerebral wall. Neurotoxicol. Teratol. 27: 3-14.
7. Da, L., et al. 2006. Dual promoters control the cell-specific expression of the human cell death-inducing DFF-45-like effector B gene. Biochem. J. 393: 779-788.

CHROMOSOMAL LOCATION

Genetic locus: CIDEB (human) mapping to 14q12.

SOURCE

CIDE-B (5X) is a mouse monoclonal antibody raised against amino acids 3-111 of CIDE-B of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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 for detailed protocols and support products.

APPLICATIONS

CIDE-B (5X) is recommended for detection of CIDE-B of 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).

Suitable for use as control antibody for CIDE-B siRNA (h): sc-37441, CIDE-B shRNA Plasmid (h): sc-37441-SH and CIDE-B shRNA (h) Lentiviral Particles: sc-37441-V.

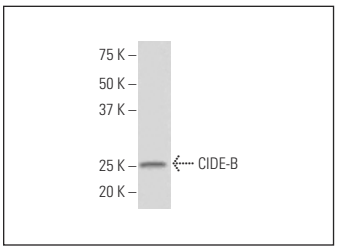
Molecular Weight of CIDE-B: 26 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

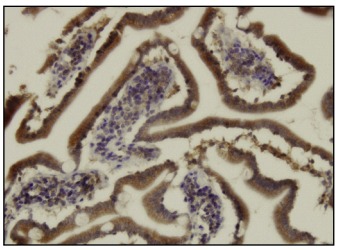
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CIDE-B (5X): sc-101244. Western blot analysis of CIDE-B expression in Hep G2 whole cell lysate.



CIDE-B (5X): sc-101244. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human small Intestine tissue showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Singaravelu, R., et al. 2013. Human serum activates CIDEB-mediated lipid droplet enlargement in hepatoma cells. Biochem. Biophys. Res. Commun. 441: 447-452.
2. Zhang, J., et al. 2017. AUP1 (ancient ubiquitous protein 1) is a key determinant of hepatic very-low-density lipoprotein assembly and secretion. Arterioscler. Thromb. Vasc. Biol. 37: 633-642.

RESEARCH USE

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