

CIDE-A (M-20): sc-8732

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

- 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.
- 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.
- Enari, M., et al. 1998. A caspase-activated Dnase that degrades DNA during apoptosis. *Nature* 391: 43-50.
- Halenbeck, R., et al. 1998. CPAN, a human nuclease regulated by the caspase-sensitive inhibitor DFF45. *Curr. Biol.* 8: 537-540.
- Sakahira, H., et al. 1998. Cleavage of CAD inhibitor in CAD activation and DNA degradation during apoptosis. *Nature* 391: 96-99.
- 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.
- Inohara, N., et al. 1999. Identification of regulatory and catalytic domains in the apoptosis nuclease DFF40/CAD. *J. Biol. Chem.* 274: 270-274.

CHROMOSOMAL LOCATIONS

Genetic locus: Cidea (mouse) mapping to 18 E1.

SOURCE

CIDE-A (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of CIDE-A 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-8732 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-A (M-20) is recommended for detection of CIDE-A 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).

CIDE-A (M-20) is also recommended for detection of CIDE-A in additional species, including equine.

Suitable for use as control antibody for CIDE-A siRNA (m): sc-37440, CIDE-A shRNA Plasmid (m): sc-37440-SH and CIDE-A shRNA (m) Lentiviral Particles: sc-37440-V.

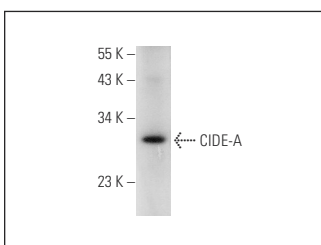
Molecular Weight of CIDE-A: 26 kDa.

Positive Controls: mouse heart extract: sc-2254 or rat heart extract: sc-2393.

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-A (M-20): sc-8732. Western blot analysis of CIDE-A expression in rat heart tissue extract.

RESEARCH USE

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