SANTA CRUZ BIOTECHNOLOGY, INC.

caspase-10 p20 (C-16): sc-6185

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

A unique family of cysteine proteases has been described that differs in sequence, structure and substrate specificity from any previously described protease family. This family, Ced-3/caspase-1, is comprised of caspase-1, caspase-2, caspase-3, caspase-4, caspase-6, caspase-7 (also designated Mch3, ICE-LAP3 or CMH-1), caspase-9 and caspase-10. Ced-3/caspase-1 family members function as key components of the apoptotic machinery and act to destroy specific target proteins which are critical to cellular longevity. Poly(ADP-ribose) polymerase plays an integral role in surveying for DNA mutations and double strand breaks. Caspase-3, caspase-7 and caspase-9, but not caspase-1, cleave the nuclear protein PARP into an apoptotic fragment. Caspase-6, but not caspase-3, cleaves the nuclear lamins which are critical to maintaining the integrity of the nuclear envelope and cellular morphology. caspase-10 activates caspase-3 and caspase-7 in response to apoptotic stimuli.

REFERENCES

1. Lindahl, T., et al. 1995. Post-translational modification of poly (ADP-ribose) polymerase induced by DNA strand breaks. Trends Biochem. Sci. 20: 405-411.
2. Duan, H., et al. 1996. ICE-LAP3, a novel mammalian homologue of the *Caenorhabditis elegans* cell death protein Ced-3 is activated during Fas- and tumor necrosis factor-induced apoptosis. J. Biol. Chem. 271: 1621-1625.
3. Duan, H., et al. 1996. ICE-LAP6, a novel member of the ICE/Ced-3 gene family, is activated by the cytotoxic T cell protease granzyme B. J. Biol. Chem. 271: 16720-16724.
4. Fernandes-Alnemri, T.F., et al. 1996. *In vitro* activation of CPP32 and Mch3 by Mch4, a novel human apoptotic cysteine protease containing two FADD-like domains. Proc. Natl. Acad. Sci. USA 93: 7464-7469.

CHROMOSOMAL LOCATION

Genetic locus: CASP10 (human) mapping to 2q33.1.

SOURCE

caspase-10 p20 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of caspase-10 p20 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.2% gelatin.

Blocking peptide available for competition studies, sc-6185 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

caspase-10 p20 (C-16) is recommended for detection of p20 subunit and precursor of caspase-10 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

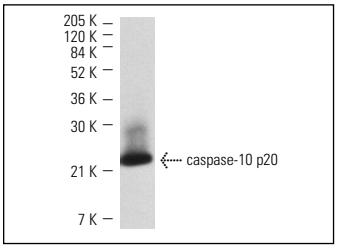
caspase-10 p20 (C-16) is also recommended for detection of p20 subunit and precursor of caspase-10 in additional species, including porcine.

Suitable for use as control antibody for caspase-10 siRNA (h): sc-29923, caspase-10 shRNA Plasmid (h): sc-29923-SH and caspase-10 shRNA (h) Lentiviral Particles: sc-29923-V.

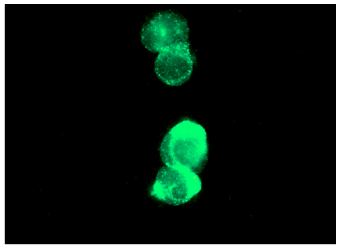
Molecular Weight of caspase-10 p20: 58/20 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

DATA



caspase-10 p20 (C-16): sc-6185. Western blot analysis of human recombinant caspase-10 p20.



caspase-10 p20 (C-16): sc-6185. Immunofluorescence staining of methanol-fixed Jurkat cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Mologni, L., et al. 1999. The novel synthetic retinoid 6-[3-adamantyl-4-hydroxyphenyl]-2-naphthalene carboxylic acid (CD437) causes apoptosis in acute promyelocytic leukemia cells through rapid activation of caspases. Blood 93: 1045-1061.
2. Rathbun, R.K., et al. 2000. Interferon-γ-induced apoptotic responses of Fanconi anemia group C hematopoietic progenitor cells involve caspase 8-dependent activation of caspase-3 family members. Blood 96: 4204-4211.
3. Shin, M.S., et al. 2002. Alterations of Fas-pathway genes associated with nodal metastasis innon-small cell lung cancer. Oncogene 21: 4129-4136.

RESEARCH USE

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