SANTA CRUZ BIOTECHNOLOGY, INC.

# caspase-12 (F-15): sc-12396

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, termed Ced-3/caspase-1, is composed of caspase-1, caspase-2, caspase-3, caspase-4, caspase-6 and caspase-7 (also designated Mch3, ICE-LAP3 or CMH-1), caspase-9, caspase-10, caspase-14, and caspase-5/caspase-12. 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. Caspase-5 (also designated TY or ICErelIII) can cleave its own precursor, an activity that requires the cysteine 245 residue. The mouse homolog of caspase-5 is designated caspase-12. Frameshift mutations in caspase-5 have been identified in MMP tumors of the endometrium, colon and stomach, indicating that caspase-5 may be a new target gene in the microsatellite mutator pathway for cancer.

## REFERENCES


1. Munday, N.A., et al. 1995. Molecular cloning and pro-apoptotic activity of ICErelII and ICErelIII, members of the ICE/CED-3 family of cysteine proteases. J. Biol. Chem. 270: 15870-15876.
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. 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.
4. 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.
5. Faucheu, C., et al. 1996. Identification of a cysteine protease closely related to interleukin-1 β-converting enzyme. Eur. J. Biochem. 236: 207-213.
6. Van de Craen, M., et al. 1997. Characterization of seven murine caspase family members. FEBS Lett. 403: 61-69.
7. Fischer, H. et al. 2002. Human caspase 12 has acquired deleterious mutations. Biochem. Biophys. Res. Commun. 293: 722-726.


## CHROMOSOMAL LOCATION

Genetic locus: Casp12 (mouse) mapping to 9 A1.

## SOURCE

caspase-12 (F-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of caspase-12 of mouse origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-12396 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

caspase-12 (F-15) is recommended for detection of caspase-12 of mouse and rat 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).

Suitable for use as control antibody for caspase-12 siRNA (m): sc-29924, caspase-12 shRNA Plasmid (m): sc-29924-SH and caspase-12 shRNA (m) Lentiviral Particles: sc-29924-V.

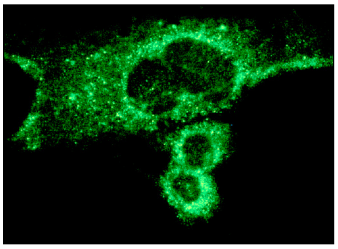
Molecular Weight of caspase-12: 50 kDa.

Positive Controls: $BC_3H1$ cell lysate: sc-2299 or NIH/3T3 + UV cell lysate: sc-3804.

## 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.

## DATA



caspase-12 (F-15): sc-12396. Immunofluorescence staining of methanol-fixed $BC_3H1$ cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS


1. Mu, Y., et al. 2009. Action mechanism of Yi Guan Jian decoction on CCl4 induced cirrhosis in rats. J. Ethnopharmacol. 121: 35-42.


## 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.