SANTA CRUZ BIOTECHNOLOGY, INC.

caspase-12 (H-6): sc-515103

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 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.

CHROMOSOMAL LOCATION

Genetic locus: CASP12 (human) mapping to 11q22.3.

SOURCE

caspase-12 (H-6) is a mouse monoclonal antibody raised against amino acids 38-124 mapping near the N-terminus of caspase-12 of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

caspase-12 (H-6) is available conjugated to agarose (sc-515103 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515103 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; and to either phycoerythrin (sc-515103 PE), fluorescein (sc-515103 FITC) or Alexa Fluor® 488 (sc-515103 AF488) or Alexa Fluor® 647 (sc-515103 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

caspase-12 (H-6) is recommended for detection of caspase-12 of human origin by Western Blotting (starting dilution 1:100, 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 caspase-12 siRNA (h): sc-72797, caspase-12 shRNA Plasmid (h): sc-72797-SH and caspase-12 shRNA (h) Lentiviral Particles: sc-72797-V.

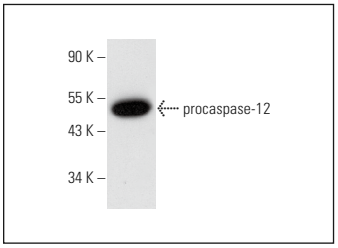
Molecular Weight of caspase-12: 50 kDa.

Positive Controls: human heart extract: sc-363763.

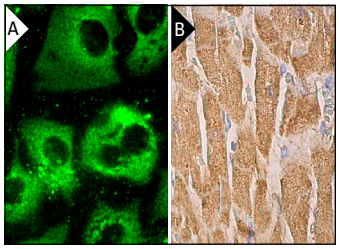
RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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



caspase-12 (H-6): sc-515103. Western blot analysis of procaspase-12 expression in human heart tissue extract.



caspase-12 (H-6): sc-515103. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes (**B**).

SELECT PRODUCT CITATIONS

1. Qu, C., et al. 2017. Dihydroartemisinin exerts anti-tumor activity by inducing mitochondrion and endoplasmic reticulum apoptosis and autophagic cell death in human glioblastoma cells. Front. Cell. Neurosci. 11: 310.
2. Zhao, H., et al. 2021. Cisplatin induces damage of auditory cells: possible relation with dynamic variation in calcium homeostasis and responding channels. Eur. J. Pharmacol. 914: 174662.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.