SANTA CRUZ BIOTECHNOLOGY, INC.

caspase-7 p10 (D-18): sc-8511

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

Caspases are cysteine proteases which play important roles in the activation of cytokines and in apoptosis. Caspase-7 is also known as CE-LAP3 (for IL-1 converting enzyme-like apoptotic protease 3), MCH3, and CMH-1. Caspase-7 is a member of the CED-3 subfamily of caspases and is a 303 amino acid protein with significant similarity to caspase-3. Caspase-3 and -7 represent executioner/effector caspases that directly cause apoptotic morphological changes by cleaving various death substrates. The human caspase-7 maps to chromosome 10q25.3 and encodes a protein that is cleaved into p20 and p10 active subunits. The heterodimeric Caspase-7 is activated to its catalytically active large subunit in intact cells undergoing apoptosis. Caspase-7 is a cytoplamic protein expressed in fetal and adult tissues including lung, skeletal muscle, liver, kidney, spleen and heart, as well as various cell lines, such as Jurkat cells.

REFERENCES

1. Tiso, N., et al. 1996. Chromosomal localization of the human genes, CPP32, Mch2, Mch3, and Ich-1, involved in cellular apoptosis. Biochem. Biophys. Res. Commun. 225: 983-989.
2. Cohen, G.M. 1997. Caspases: the executioners of apoptosis. Biochem. J. 326: 1-16.
3. Chandler, J.M., et al. 1998. Different subcellular distribution of caspase-3 and caspase-7 following FAS-induced apoptosis in mouse liver. J. Biol. Chem. 273: 10815-10818.
4. Marcelli, M., et al. 1999. Signaling pathway activated during apoptosis of the prostate cancer cell line LNCaP: overexpression of caspase-7 as a new gene therapy strategy for prostate cancer. Cancer Res. 59: 382-390.

CHROMOSOMAL LOCATION

Genetic locus: CASP7 (human) mapping to 10q25.3; Casp7 (mouse) mapping to 19 D2.

SOURCE

caspase-7 p10 (D-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of caspase-7 p10 of human 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-8511 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.

RESEARCH USE

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

APPLICATIONS

caspase-7 p10 (D-18) is recommended for detection of caspase-7 p10 of mouse, rat and 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-7 p10 (D-18) is also recommended for detection of caspase-7 p10 in additional species, including canine and bovine.

Suitable for use as control antibody for caspase-7 siRNA (h): sc-29929, caspase-7 siRNA (m): sc-29928, caspase-7 shRNA Plasmid (h): sc-29929-SH, caspase-7 shRNA Plasmid (m): sc-29928-SH, caspase-7 shRNA (h) Lentiviral Particles: sc-29929-V and caspase-7 shRNA (m) Lentiviral Particles: sc-29928-V.

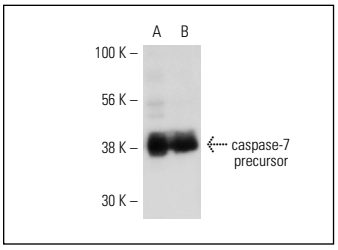
Molecular Weight of procaspase-7 splice variants: 28-38 kDa.

Molecular Weight of caspase-7 p20 subunit: 20 kDa.

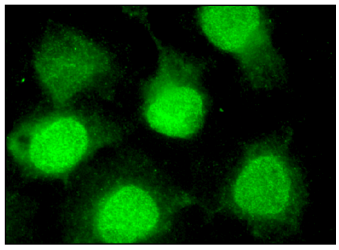
Molecular Weight of caspase-7 p10 subunit: 10 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, CTLL-2 cell lysate: sc-2242 or HeLa whole cell lysate: sc-2200.

DATA



caspase-7 p10 (D-18): sc-8511. Western blot analysis of caspase-7 expression in MCF7 (**A**) and CTLL-2 (**B**) whole cell lysates.



caspase-7 p10 (D-18): sc-8511. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Song, Z, et al. 2003. Direct interaction between survivin and Smac/DIABLO is essential for the anti-apoptotic activity of survivin during taxol-induced apoptosis. J. Biol Chem. 278: 23130-23140.
2. Krepela, E., et al. 2004. Increased expression of Apaf-1 and procaspase-3 and the functionality of intrinsic apoptosis apparatus in non-small cell lung carcinoma. Biol. Chem. 385: 153-168.