SANTA CRUZ BIOTECHNOLOGY, INC.

caspase-7 p10 (E-11): sc-271747

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.
5. Germain, M., et al. 1999. Cleavage of automodified poly(ADP-ribose) polymerase during apoptosis. Evidence for involvement of caspase-7. J. Biol. Chem. 274: 28379-28384.
6. Araya, R., et al. 2002. Yeast two-hybrid screening using constitutive-active caspase-7 as bait in the identification of PA28γ as an effector caspase substrate. Cell Death Differ. 9: 322-328.

CHROMOSOMAL LOCATION

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

SOURCE

caspase-7 p10 (E-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 257-281 near the C-terminus of caspase-7 p10 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-271747 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

caspase-7 p10 (E-11) is recommended for detection of p10 subunit and precursor of caspase-7 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

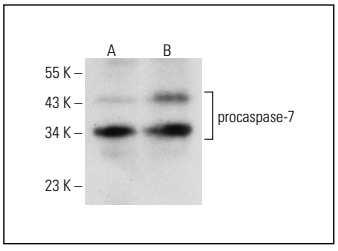
Molecular Weight of caspase-7 p10 subunit: 10 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, Jurkat whole cell lysate: sc-2204 or MOLT-4 cell lysate: sc-2233.

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 A/G PLUS-Agarose: sc-2003 (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.

DATA



caspase-7 (E-11): sc-271747. Western blot analysis of procaspase-7 expression in Jurkat (**A**) and MOLT-4 (**B**) whole cell lysates.

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.