

# caspase-7 p10 (B-3): sc-365034

## 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 cytoplasmic 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

caspase-7 p10 (B-3) 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<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

caspase-7 p10 (B-3) is available conjugated to agarose (sc-365034 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365034 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365034 PE), fluorescein (sc-365034 FITC), Alexa Fluor<sup>®</sup> 488 (sc-365034 AF488), Alexa Fluor<sup>®</sup> 546 (sc-365034 AF546), Alexa Fluor<sup>®</sup> 594 (sc-365034 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-365034 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-365034 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-365034 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365034 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

caspase-7 p10 (B-3) 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), 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).

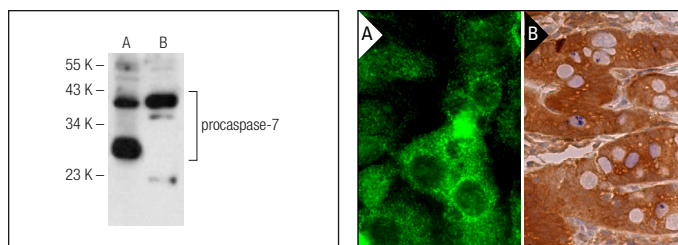
Suitable for use as control antibody for caspase-7 siRNA (h): sc-29929, caspase-7 siRNA (m): sc-29928, caspase-7 shRNA Plasmid (h): sc-29929-SH, caspase-7 shRNA Plasmid (m): sc-29928-SH, caspase-7 shRNA (h) Lentiviral Particles: sc-29929-V and caspase-7 shRNA (m) Lentiviral Particles: sc-29928-V.

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

Molecular Weight of caspase-7 p20/p10 subunits: 20/10 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237, MIA PaCa-2 cell lysate: sc-2285 or MCF7 whole cell lysate: sc-2206.

## DATA



caspase-7 (B-3): sc-365034. Western blot analysis of procaspase-7 expression in SK-N-MC (A) and MIA PaCa-2 (B) whole cell lysates.

caspase-7 p10 (B-3): sc-365034. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

1. Li, M.Y., et al. 2019. Adrenomedullin alleviates the pyroptosis of Leydig cells by promoting autophagy via the ROS-AMPK-mTOR axis. *Cell Death Dis.* 10: 489.
2. Cao, B., et al. 2019. MiR-512-5p suppresses proliferation, migration and invasion, and induces apoptosis in non-small cell lung cancer cells by targeting ETS1. *Mol. Med. Rep.* 19: 3604-3614.

## 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.