

# caspase-3 p11 (C-6): sc-271759

## BACKGROUND

Caspase-3, also known as apopain, SCA-1, Yama and CPP32, is an aspartate-specific cysteine protease that belongs to the ICE subfamily of caspases. Caspase-3 is expressed in cells as an inactive precursor from which the p17 and p11 subunits of the mature caspase-3 are proteolytically generated during apoptosis. The caspase-3 precursor is first cleaved at Asp 175-Ser 176 to produce the p11 subunit and the p20 peptide. Subsequently, the p20 peptide is cleaved at Asp 28-Ser 29 to generate the mature p17 subunit. The active caspase-3 enzyme is a heterodimer composed of two p17 and two p11 subunits. At the onset of apoptosis, caspase-3 proteolytically cleaves PARP at a Asp 216-Gly 217 bond. During the execution of the apoptotic cascade, activated caspase-3 releases SREBP from the membrane of the ER in a proteolytic reaction that is distinct from their normal sterol-dependent activation. Caspase-3 cleaves and activates SREBPs between the basic helix-loop-helix leucine zipper domain and the membrane attachment domain. Caspase-3 also cleaves and activates caspase-6, -7 and -9. The human caspase-3 gene encodes a cytoplasmic protein that is highly expressed in lung, spleen, heart, liver, kidney and cells of the immune system.

## CHROMOSOMAL LOCATION

Genetic locus: CASP3 (human) mapping to 4q35.1; Casp3 (mouse) mapping to 8 B1.1.

## SOURCE

caspase-3 p11 (C-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 185-211 at the N-terminus of caspase-3 p11 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

caspase-3 p11 (C-6) is available conjugated to agarose (sc-271759 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271759 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271759 PE), fluorescein (sc-271759 FITC), Alexa Fluor<sup>®</sup> 488 (sc-271759 AF488), Alexa Fluor<sup>®</sup> 546 (sc-271759 AF546), Alexa Fluor<sup>®</sup> 594 (sc-271759 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-271759 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-271759 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-271759 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271759 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## 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-3 p11 (C-6) is recommended for detection of caspase-3 p11 subunit and full length procaspase-3 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).

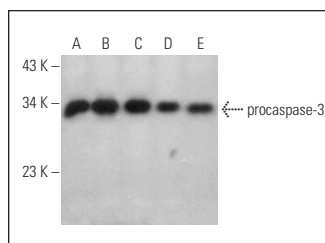
Suitable for use as control antibody for caspase-3 siRNA (h): sc-29237, caspase-3 siRNA (m): sc-29927, caspase-3 shRNA Plasmid (h): 29237-SH, caspase-3 shRNA Plasmid (m): sc-29927-SH, caspase-3 shRNA (h) Lentiviral Particles: sc-29237-V and caspase-3 shRNA (m) Lentiviral Particles: sc-29927-V.

Molecular Weight of caspase-3 p11: 11 kDa.

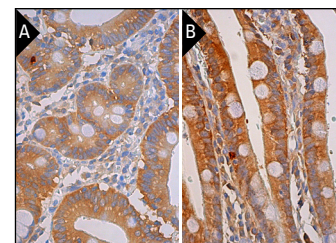
Molecular Weight of procaspase-3: 32 kDa.

Positive Controls: HuT 78 whole cell lysate: sc-2208, NIH/3T3 whole cell lysate: sc-2210 or BJAB whole cell lysate: sc-2207.

## DATA



caspase-3 p11 (C-6): sc-271759. Western blot analysis of procaspase-3 expression in HUT 78 (A), CCRF-CEM (B), BJAB (C), C6 (D) and NIH/3T3 (E) whole cell lysates.



caspase-3 p11 (C-6) HRP: sc-271759 HRP. Direct immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cyto-plasmic staining of glandular cells. Blocked with 0.25X UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 (A), caspase-3 p11 (C-6): sc-271759. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic and membrane staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

- Hoffmann, A., et al. 2014. Intrinsic lens forming potential of mouse lens epithelial versus newt iris pigment epithelial cells in three-dimensional culture. *Tissue Eng. Part C Methods* 20: 91-103.
- Yin, P., et al. 2019. Alsterpaullone induces apoptosis of Hep G2 cells via a p38 mitogen-activated protein kinase signaling pathway. *Oncol. Lett.* 17: 1177-1183.
- Kandemir, F.M., et al. 2020. Protective effects of morin against acrylamide-induced hepatotoxicity and nephrotoxicity: a multi-biomarker approach. *Food Chem. Toxicol.* 138: 111190.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.