

caspase-3 p17 (H-60): sc-98785

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 Asp175-Ser176 to produce the p11 subunit and the p20 peptide. Subsequently, the p20 peptide is cleaved at Asp28-Ser29 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 an Asp216-Gly217 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 p17 (H-60) is a rabbit polyclonal antibody raised against amino acids 56-104 mapping near the N-terminus of caspase-3 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.

APPLICATIONS

caspase-3 p17 (H-60) is recommended for detection of p17 subunit and full length precursor of caspase-3 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), 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); non cross-reactive with p12 subunit. caspase-3 p17 (H-60) is also recommended for detection of p17 subunit and full length precursor of caspase-3 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for caspase-3 siRNA (h): sc-29237, caspase-3 siRNA (m): sc-29927, caspase-3 shRNA Plasmid (h): sc-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 procaspase-3 p17: 32 kDa.

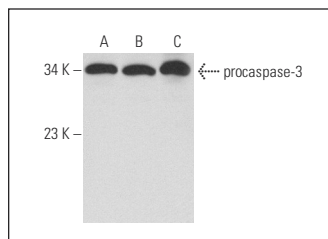
Molecular Weight of caspase-3 p17: 17 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

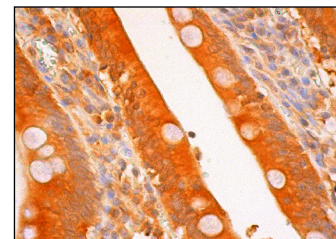
STORAGE

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

DATA



caspase-3 p17 (H-60): sc-98785. Western blot analysis of caspase-3 p17 expression in CCRF-CEM (A), Jurkat (B) and CCRF-HSB-2 (C) whole cell lysates.



caspase-3 p17 (H-60): sc-98785. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic and nuclear staining of glandular cells.

SELECT PRODUCT CITATIONS

- Gopinath, K., et al. 2011. Neuroprotective effect of naringin, a dietary flavonoid against 3-nitropropionic acid-induced neuronal apoptosis. *Neurochem. Int.* 59: 1066-1073.
- Yuan, D., et al. 2014. Upregulated expression of SSTR1 is involved in neuronal apoptosis and is coupled to the reduction of bcl-2 following intracerebral hemorrhage in adult rats. *Cell. Mol. Neurobiol.* 34: 951-961.
- Liu, X., et al. 2015. BTEB2 prevents neuronal apoptosis via promoting basal phosphorylation in rat intracerebral hemorrhage model. *J. Mol. Neurosci.* 55: 206-216.
- Cui, Z., et al. 2015. The role of Homer1b/c in neuronal apoptosis following LPS-induced neuroinflammation. *Neurochem. Res.* 40: 204-215.
- Liu, J., et al. 2015. Tumor-targeting novel manganese complex induces ROS-mediated apoptotic and autophagic cancer cell death. *Int. J. Mol. Med.* 35: 607-616.
- Yao, J., et al. 2015. Rosiglitazone exerts neuroprotective effects via the suppression of neuronal autophagy and apoptosis in the cortex following traumatic brain injury. *Mol. Med. Rep.* 12: 6591-6597.
- Hao, F., et al. 2015. Curcumin attenuates palmitate-induced apoptosis in MIN6 pancreatic β -cells through PI3K/Akt/FoxO1 and mitochondrial survival pathways. *Apoptosis* 20: 1420-1432.

RESEARCH USE

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



Try **caspase-3 p17 (B-4): sc-271028** or **caspase-3 p17 (D-12): sc-373730**, our highly recommended monoclonal alternatives to caspase-3 p17 (H-60).