

# caspase-3 p17 (T-20): sc-22140

## 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 p17 (T-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of caspase-3 p17 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-22140 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

caspase-3 p17 (T-20) is recommended for detection of caspase-3 p17 and full length procaspase-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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-3 p17 (T-20) is also recommended for detection of caspase-3 p17 and full length procaspase-3 in additional species, including equine, canine, bovine, porcine and feline.

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.

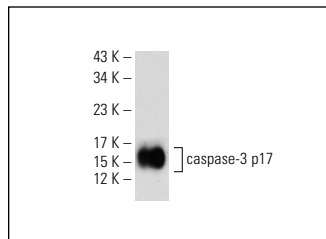
Molecular Weight of procaspase-3: 32 kDa.

Molecular Weight of caspase-3 p17: 17 kDa.

## 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 (T-20): sc-22140. Western blot analysis of human recombinant caspase-3.

## SELECT PRODUCT CITATIONS

1. Moriguchi, M., et al. 2010. Transforming growth factor  $\beta$  inducible apoptotic cascade in epithelial cells during rat molar tooth eruptions. *Anat. Sci. Int.* 85: 92-101.
2. Lu, X.Y., et al. 2010. Anti- $\alpha$ -internexin autoantibody from neuropsychiatric lupus induce cognitive damage via inhibiting axonal elongation and promote neuron apoptosis. *PLoS ONE* 5: e11124.
3. Mulik, S., et al. 2011. Activation of endothelial roundabout receptor 4 reduces the severity of virus-induced keratitis. *J. Immunol.* 186: 7195-7204.
4. Zhang, Y.J., et al. 2012. Imatinib induces H2AX phosphorylation and apoptosis in chronic myelogenous leukemia cells *in vitro* via caspase-3/Mst1 pathway. *Acta Pharmacol. Sin.* 33: 551-557.
5. Goonetilleke, U.R., et al. 2012. Death is associated with complement C3 depletion in cerebrospinal fluid of patients with pneumococcal meningitis. *MBio* 3: e00272.
6. Yan, F., et al. 2013. Progesterone attenuates early brain injury after subarachnoid hemorrhage in rats. *Neurosci. Lett.* 543: 163-167.
7. Zhang, H., et al. 2013. Mitochondrial and endoplasmic reticulum pathways involved in microcystin-LR-induced apoptosis of the testes of male frog (*Rana nigromaculata*) *in vivo*. *J. Hazard. Mater.* 252-253: 382-389.

## RESEARCH USE

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

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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 (T-20).