

# caspase-3 (h): 293T Lysate: sc-113427

## 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.

## REFERENCES

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4. Vallender, E.J. and Lahn, B.T. 2006. A primate-specific acceleration in the evolution of the caspase-dependent apoptosis pathway. *Hum. Mol. Genet.* 15: 3034-3040.
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## CHROMOSOMAL LOCATION

Genetic locus: CASP3 (human) mapping to 4q35.1.

## PRODUCT

caspase-3 (h): 293T Lysate represents a lysate of human caspase-3 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

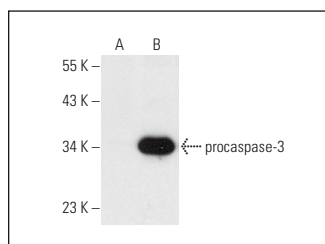
## APPLICATIONS

caspase-3 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive caspase-3 antibodies.

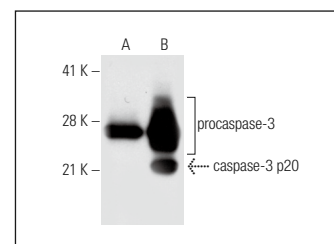
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

caspase-3 (46): sc-136219 is recommended as a positive control antibody for Western Blot analysis of enhanced human caspase-3 expression in caspase-3 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## DATA



caspase-3 (46): sc-136219. Western blot analysis of procaspase-3 expression in non-transfected: sc-117752 (A) and human caspase-3 transfected: sc-113427 (B) 293T whole cell lysates.



caspase-3 (E-8): sc-7272. Western blot analysis of caspase-3 expression in non-transfected: sc-117752 (A) and human caspase-3 transfected: sc-113427 (B) 293T whole cell lysates.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## RESEARCH USE

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

## PROTOCOLS

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