

caspase-3 (h3): 293T Lysate: sc-176342

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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CHROMOSOMAL LOCATION

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

PRODUCT

caspase-3 (h3): 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 (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive caspase-3 antibodies. Recommended use: 10-20 µl per lane.

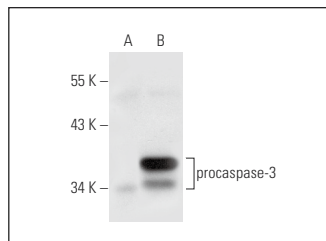
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

caspase-3 (3CSP03): sc-56046 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).

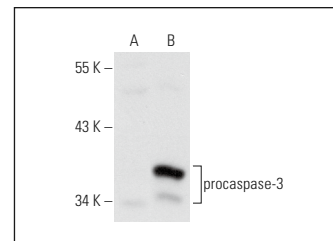
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



caspase-3 (3CSP03): sc-56046. Western blot analysis of caspase-3 expression in non-transfected: sc-117752 (A) and human caspase-3 transfected: sc-176342 (B) 293T whole cell lysates.



caspase-3 (3F49): sc-70498. Western blot analysis of procaspase-3 expression in non-transfected: sc-117752 (A) and human caspase-3 transfected: sc-176342 (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 for detailed protocols and support products.