SANTA CRUZ BIOTECHNOLOGY, INC.

# caspase-7 p20 (N-17): sc-8510

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Caspases are cysteine proteases which play important roles in the activation of cytokines and in apoptosis. Caspase-7 is also known as CE-LAP3 (for IL-1 converting enzyme-like apoptotic protease 3), MCH3, and CMH-1. Caspase-7 is a member of the CED-3 subfamily of caspases and is a 303 amino acid protein with significant similarity to caspase-3. Caspase-3 and -7 represent executioner/effector caspases that directly cause apoptotic morphological changes by cleaving various death substrates. The human caspase-7 maps to chromosome 10q25.3 and encodes a protein that is cleaved into p20 and p10 active subunits. The heterodimeric Caspase-7 is activated to its catalytically active large subunit in intact cells undergoing apoptosis. Caspase-7 is a cytoplamic protein expressed in fetal and adult tissues including lung, skeletal muscle, liver, kidney, spleen and heart, as well as various cell lines, such as Jurkat cells.

## CHROMOSOMAL LOCATION

Genetic locus: CASP7 (human) mapping to 10q25.3.

## SOURCE

caspase-7 p20 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of caspase-7 p20 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-8510 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

caspase-7 p20 (N-17) is recommended for detection of p20 subunit and precursor of caspase-7 of 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).

caspase-7 p20 (N-17) is also recommended for detection of p20 subunit and precursor of caspase-7 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for caspase-7 siRNA (h): sc-29929, caspase-7 shRNA Plasmid (h): sc-29929-SH and caspase-7 shRNA (h) Lentiviral Particles: sc-29929-V.

Molecular Weight of procaspase-7 splice variants: 28-38 kDa.

Molecular Weight of caspase-7 p20 subunit: 20 kDa.

Molecular Weight of caspase-7 p10 subunit: 10 kDa.

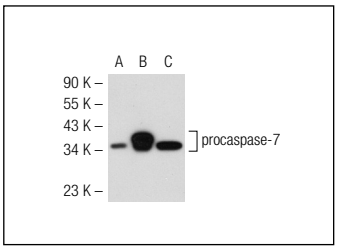
## RESEARCH USE

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

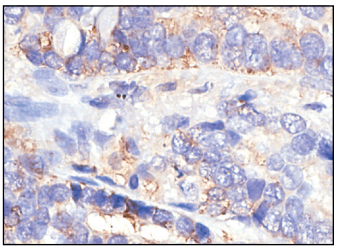
## STORAGE

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

## DATA




caspase-7 p20 (N-17): sc-8510. Western blot analysis of caspase-7 expression in non-transfected 293T: sc-117752 (**A**), human caspase-7 transfected 293T: sc-176087 (**B**) and HeLa (**C**) whole cell lysates.



caspase-7 p20 (N-17): sc-8510. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human lung tumor showing cytoplasmic staining.

## SELECT PRODUCT CITATIONS


1. Vaquero, E.C., et al. 2003. Extracellular matrix proteins protect pancreatic cancer cells from death via mitochondrial and nonmitochondrial pathways. Gastroenterology 125: 1188-1202.
2. Fehlberg, S., et al. 2003. Bisphenol A diglycidyl ether-induced apoptosis involves Bax/Bid-dependent mitochondrial release of apoptosis-inducing factor (AIF), cytochrome c and Smac/DIABLO. Br. J. Pharmacol. 139: 495-500.
3. Del Bello, B., et al. 2004. Role of caspases-3 and -7 in Apaf-1 proteolytic cleavage and degradation events during cisplatin-induced apoptosis in melanoma cells. Exp. Cell Res. 293: 302-310.
4. Acevedo-Duncan, M., et al. 2004. Aloe-emodin modulates PKC isozymes, inhibits proliferation, and induces apoptosis in U-373MG glioma cells. Int. Immunopharmacol. 4: 1775-1784.
5. Clarke, C., et al. 2005. Cleavage of claspin by caspase-7 during apoptosis inhibits the Chk1 pathway. J. Biol. Chem. 280: 35337-35345.
6. Ravi, R., et al. 2006. Resistance of cancers to immunologic cytotoxicity and adoptive immunotherapy via X-linked inhibitor of apoptosis protein expression and coexisting defects in mitochondrial death signaling. Cancer Res. 66: 1730-1739.
7. Zhang, X., et al. 2006. Proteolysis consistent with activation of caspase-7 after severe traumatic brain injury in humans. J. Neurotrauma 23: 1583-1590.