SANTA CRUZ BIOTECHNOLOGY, INC.

# caspase-8 p10 (S-19): sc-6135

## BACKGROUND

Initiator caspases, which include caspase-8, activate effector caspases by cleaving inactive forms of effector caspases. In the activation cascade responsible for apoptosis induced by TNFRSF1A and mediated by TNFRSF6/FAS, caspase-8 is the most upstream protease. Caspase-8 binds to adaptor molecule FADD, forming an aggregate referred to as death-inducing signaling complex (DISC), which activates caspase-8. The actived protein is released from the complex and further activates downstream apoptotic proteases. Caspase-8, which is a heterodimer consisting of two subunits (p18 and p10), is widely expressed, but is detected at highest levels in peripheral blood leukocytes (PBLs), thymus, liver and spleen. Defects in CASP8, the gene encoding for caspase-8, may cause CASP8D (caspase-8 deficiency disorder), which is characterized by splenomegaly and CD95-induced apoptosis of PBLs, may lead to immunodeficiency due to defects in T lymphocyte, NK cell and B lymphocyte activation.

## REFERENCES


1. Nagata, S., et al. 1995. The Fas death factor. Science 267: 1449-1456.
2. Cleveland, J.L., et al. 1995. Contenders in FasL/TNF death signaling. Cell 81: 479-482.
3. Fernandes-Alnemri, T., et al. 1996. *In vitro* activation of CPP32 and Mch3 by Mch4, a novel human apoptotic cysteine protease containing two FADD-like domains. Proc. Natl. Acad. Sci. USA 93: 7464-7469.
4. Medema, J.P., et al. 1997. FLICE is activated by association with the CD95 death-inducing signaling complex (DISC). EMBO J. 16: 2794-804.
5. Srinivasan, A., et al. 1998. Bcl-$x_L$ functions downstream of caspase-8 to inhibit Fas- and tumor necrosis factor receptor 1-induced apoptosis of MCF7 breast carcinoma cells. J. Biol. Chem. 273: 4523-4529.
6. Rytomaa, M., et al. 1999. Involvement of FADD and caspase-8 signalling in detachment-induced apoptosis. Curr. Biol. 9: 1043-1046.


## CHROMOSOMAL LOCATION

Genetic locus: CASP8 (human) mapping to 2q33.1.

## SOURCE

caspase-8 p10 (S-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of caspase-8 p10 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.2% gelatin.

Blocking peptide available for competition studies, sc-6135 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

caspase-8 p10 (S-19) is recommended for detection of p10 subunit and precursor of caspase-8 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for caspase-8 siRNA (h): sc-29930, caspase-8 shRNA Plasmid (h): sc-29930-SH and caspase-8 shRNA (h) Lentiviral Particles: sc-29930-V.

Molecular Weight of caspase-8 precursor & p18, p10 subunits: 55/18/10 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS


1. Vassilev, A., et al. 1999. Bruton's tyrosine kinase as an inhibitor of the Fas/CD95 death-inducing signaling complex. J. Biol. Chem. 274: 1646-1656.
2. Wang, T., et al. 2007. Recombinant immunoproapoptotic proteins with furin site can translocate and kill HER2-positive cancer cells. Cancer Res. 67: 11830-11839.
3. Sasaki, H., et al. 2007. A novel selective progesterone receptor modulator asoprisnil activates tumor necrosis factor-related apoptosis-inducing ligand (TRAIL)-mediated signaling pathway in cultured human uterine leiomyoma cells in the absence of comparable effects on myometrial cells. J. Clin. Endocrinol. Metab. 92: 616-623.
4. Fazzi, F., et al. 2014. TNFR1/phox interaction and TNFR1 mitochondrial translocation thwart silica-induced pulmonary fibrosis. J. Immunol. 192: 3837-3846.


## RESEARCH USE

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

## PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.