SANTA CRUZ BIOTECHNOLOGY, INC.

caspase-8 (8CSP03): sc-56070

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

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

SOURCE

caspase-8 (8CSP03) is a mouse monoclonal antibody raised against full-length recombinant caspase-8 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

caspase-8 (8CSP03) is available conjugated to agarose (sc-56070 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-56070 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-56070 PE), fluorescein (sc-56070 FITC), Alexa Fluor® 488 (sc-56070 AF488), Alexa Fluor® 546 (sc-56070 AF546), Alexa Fluor® 594 (sc-56070 AF594) or Alexa Fluor® 647 (sc-56070 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-56070 AF680) or Alexa Fluor® 790 (sc-56070 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

caspase-8 (8CSP03) is recommended for detection 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), 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).

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: 55 kDa.

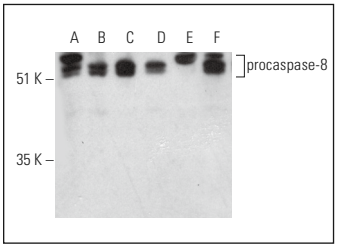
Molecular Weight of caspase-8 p18/p10 subunits: 18/10 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, CCRF-CEM cell lysate: sc-2225 or MOLT-4 cell lysate: sc-2233.

STORAGE

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

DATA



caspase-8 (8CSP03) HRP: sc-56070 HRP. Direct western blot analysis of procaspase-8 expression in HeLa (**A**), Jurkat (**B**), CCRF-CEM (**C**), MOLT-4 (**D**), HL-60 (**E**) and SW480 (**F**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Komarov, A.P., et al. 2008. Functional genetic screening reveals the role of mitochondrial cytochrome b as a mediator of Fas-induced apoptosis. Proc. Natl. Acad. Sci. USA 105: 14453-14458.
2. Huang, P.J., et al. 2012. *In vitro* and *in vivo* activity of gallic acid and *Toona sinensis* leaf extracts against HL-60 human premyelocytic leukemia. Food Chem. Toxicol. 50: 3489-3497.
3. Qin, R., et al. 2013. Long non-coding RNA MEG3 inhibits the proliferation of cervical carcinoma cells through the induction of cell cycle arrest and apoptosis. Neoplasma 60: 486-492.
4. Liu, F., et al. 2014. MicroRNA-106b-5p boosts glioma tumorigensis by targeting multiple tumor suppressor genes. Oncogene 33: 4813-4822.
5. Hwang, K.Y. and Choi, Y.B. 2015. Modulation of mitochondrial antiviral signaling by human herpesvirus 8 interferon regulatory factor 1. J. Virol. 90: 506-520.
6. Quisbert-Valenzuela, E.O. and Calaf, G.M. 2016. Apoptotic effect of noscapine in breast cancer cell lines. Int. J. Oncol. 48: 2666-2674.
7. Liu, R., et al. 2017. Apigenin enhances the cisplatin cytotoxic effect through p53-modulated apoptosis. Oncol. Lett. 13: 1024-1030.
8. Han, S., et al. 2018. Roles of B7-H3 in cervical cancer and its prognostic value. J. Cancer 9: 2612-2624.
9. Jiang, X., et al. 2019. PEA-15 contributes to the clinicopathology and AKT-regulated cisplatin resistance in gastric cancer. Oncol. Rep. 41: 1949-1959.
10. Szymanska, E., et al. 2020. Synthetic lethality between VPS4A and VPS4B triggers an inflammatory response in colorectal cancer. EMBO Mol. Med. 12: e10812.

RESEARCH USE

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