

caspase-8 (3C121): sc-73526



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 activated 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 (4.1.20) is a mouse monoclonal antibody raised against full-length recombinant caspase-8 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

caspase-8 (4.1.20) 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 subunit: 18 kDa.

Molecular Weight of caspase-8 p10 subunit: 10 kDa.

Positive Controls: RD whole cell lysate: sc-364791, HL-60 whole cell lysate: sc-2209 or SUP-T1 whole cell lysate: sc-364796.

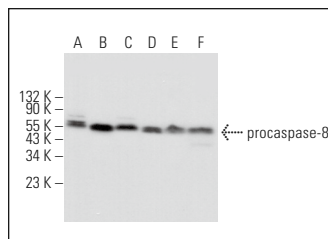
STORAGE

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

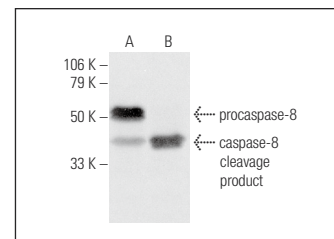
RESEARCH USE

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

DATA



caspase-8 (4.1.20): sc-73526. Western blot analysis of procaspase-8 expression in RD (A), SUP-T1 (B), Caco-2 (C), Daudi (D), HL-60 (E) and Hep G2 (F) whole cell lysates.



caspase-8 (4.1.20): sc-73526. Western blot analysis of caspase-8 cleavage in untreated (A) and Staurosporine (sc-3510) treated (B) Jurkat whole cell lysates. Note caspase-8 cleavage product expression in lane B.

SELECT PRODUCT CITATIONS

- Gringhuis, S.I., et al. 2012. Dectin-1 is an extracellular pathogen sensor for the induction and processing of IL-1 β via a noncanonical caspase-8 inflammasome. *Nat. Immunol.* 13: 246-254.
- Ghorai, A., et al. 2015. Carbon ion beam triggers both caspase-dependent and caspase-independent pathway of apoptosis in HeLa and status of PARP-1 controls intensity of apoptosis. *Apoptosis* 20: 562-580.
- Kim, S.B., et al. 2017. Caspase-8 controls the secretion of inflammatory lysyl-tRNA synthetase in exosomes from cancer cells. *J. Cell Biol.* 216: 2201-2216.
- Kim, S.L., et al. 2018. Lipocalin 2 inversely regulates TRAIL sensitivity through p38 MAPK-mediated DR5 regulation in colorectal cancer. *Int. J. Oncol.* 53: 2789-2799.
- Jiang, X., et al. 2019. PEA-15 contributes to the clinicopathology and Akt-regulated cisplatin resistance in gastric cancer. *Oncol. Rep.* 41: 1949-1959.
- Nakano, K., et al. 2019. Functional analysis of aberrantly spliced caspase8 variants in adult T-cell leukemia cells. *Mol. Cancer Res.* 17: 2522-2536.
- Kim, S.L., et al. 2020. A novel HDAC1 inhibitor, CBUD-1001, exerts anti-cancer effects by modulating the apoptosis and EMT of colorectal cancer cells. *Int. J. Oncol.* 57: 1027-1038.
- Moghadami, A.A., et al. 2020. Inhibition of USP14 induces ER stress-mediated autophagy without apoptosis in lung cancer cell line A549. *Cell Stress Chaperones* 25: 909-917.
- Shin, M.W., et al. 2021. The HDAC1 inhibitor CBUD-1001 enhances TRAIL-induced apoptosis in colorectal cancer cells. *Anticancer Res.* 41: 4353-4364.



See **caspase-8 (8CSP03): sc-56070** for caspase-8 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.