

# caspase-8 (3C121): sc-70501

## 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; Casp8 (mouse) mapping to 1 C1.3.

## SOURCE

caspase-8 (3C121) is a mouse monoclonal antibody raised against full-length recombinant caspase-8 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

caspase-8 (3C121) is recommended for detection of caspase-8 of mouse, rat and 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for caspase-8 siRNA (h): sc-29930, caspase-8 siRNA (m): sc-37226, caspase-8 siRNA (r): sc-156166, caspase-8 shRNA Plasmid (h): sc-29930-SH, caspase-8 shRNA Plasmid (m): sc-37226-SH, caspase-8 shRNA Plasmid (r): sc-156166-SH, caspase-8 shRNA (h) Lentiviral Particles: sc-29930-V, caspase-8 shRNA (m) Lentiviral Particles: sc-37226-V and caspase-8 shRNA (r) Lentiviral Particles: sc-156166-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: Jurkat whole cell lysate: sc-2204, HL-60 whole cell lysate: sc-2209 or CCRF-CEM cell lysate: sc-2225.

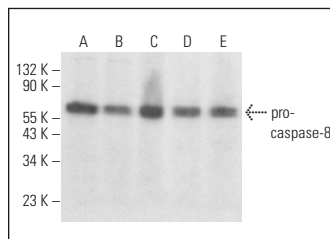
## RESEARCH USE

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

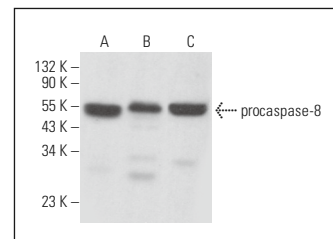
## STORAGE

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

## DATA



caspase-8 (3C121): sc-70501. Western blot analysis of procaspase-8 expression in Jurkat (A), CCRF-CEM (B), MOLT-4 (C), HL-60 (D) and CCRF-HSB-2 (E) whole cell lysates.



caspase-8 (3C121): sc-70501. Western blot analysis of procaspase-8 expression in Jurkat (A), RT-4 (B) and RAW 264.7 (C) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Zhao, Y., et al. 2012. EMT phenotype is induced by increased Src kinase activity via Src-mediated caspase-8 phosphorylation. *Cell. Physiol. Biochem.* 29: 341-352.
- Sun, P.H., et al. 2013. Receptor-like protein tyrosine phosphatase  $\kappa$  negatively regulates the apoptosis of prostate cancer cells via the JNK pathway. *Int. J. Oncol.* 43: 1560-1568.
- Choromanska, A., et al. 2015. Effects of electrophotodynamic therapy *in vitro* on human melanoma cells—melanotic (MeWo) and amelanotic (C32). *Melanoma Res.* 25: 210-224.
- Diao, Y., et al. 2016. Dasatinib promotes paclitaxel-induced necroptosis in lung adenocarcinoma with phosphorylated caspase-8 by c-Src. *Cancer Lett.* 379: 12-23.
- Luna, A.C.L., et al. 2018. Modulation of pro-apoptotic effects and mitochondrial potential on B16F10 cells by DODAC/PHO-S liposomes. *BMC Res. Notes* 11: 126.
- Jagadish, N., et al. 2020. Knockdown of A-kinase anchor protein 4 inhibits proliferation of triple-negative breast cancer cells *in vitro* and *in vivo*. *Tumour Biol.* 42: 1010428320914477.
- Turkoz Uluer, E., et al. 2021. Do Wortmannin and Thalidomide induce apoptosis by autophagy inhibition in 4T1 breast cancer cells *in vitro* and *in vivo*? *Am. J. Transl. Res.* 13: 6236-6247.
- Xu, X., et al. 2022. Dickkopf-1 exerts protective effects by inhibiting PANoptosis and retinal neovascularization in diabetic retinopathy. *Biochem. Biophys. Res. Commun.* 617: 69-76.



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.