SANTA CRUZ BIOTECHNOLOGY, INC.

caspase-8 (4i30): sc-70502

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

SOURCE

caspase-8 (4i30) is a mouse monoclonal antibody raised against full-length recombinant caspase-8 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

caspase-8 (4i30) 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.

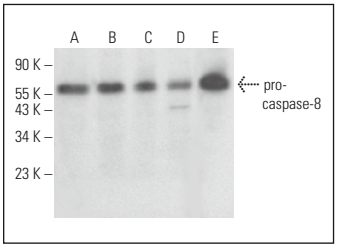
Molecular Weight of caspase-8 p10 subunit: 10 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233, HL-60 whole cell lysate: sc-2209 or CCRF-CEM cell lysate: sc-2225.

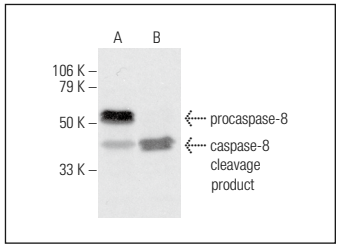
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



caspase-8 (4i30): sc-70502. Western blot analysis of procaspase-8 expression in CCRF-CEM (**A**), HL-60 (**B**), CCRF-HSB-2 (**C**), Hep G2 (**D**) and MOLT-4 (**E**) whole cell lysates.



caspase-8 (4i30): sc-70502. 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

1. Li, H., et al. 2019. Knockdown of diacylglycerol kinase ζ (DGKZ) induces apoptosis and G_2/M phase arrest in human acute myeloid leukemia HL-60 cells through MAPK/survivin/caspase pathway. Pharmazie 74: 418-422.

STORAGE

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

PROTOCOLS

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

CONJUGATES

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.