

caspase-8 (8CSP01): sc-81661

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 (8CSP01) 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.

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 (8CSP01) 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) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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: 18 kDa.

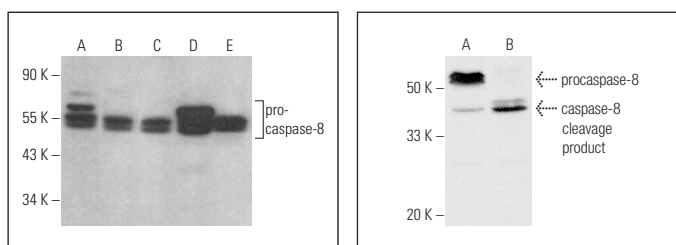
Molecular Weight of caspase-8 p10: 10 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, 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).

DATA



caspase-8 (8CSP01): sc-81661. Western blot analysis of pro-caspase-8 expression in PANC-1 (A), CCRF-CEM (B), HL-60 (C), NCI-H929 (D) and Jurkat (E) whole cell lysates.

caspase-8 (8CSP01): sc-81661. 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

- Xia, D., et al. 2011. Administration of minocycline ameliorates damage in a renal ischemia/reperfusion injury model. Clin. Invest. Med. 34: E55-E63.
- Bartoszewski, R., et al. 2014. Mangiferin has an additive effect on the apoptotic properties of hesperidin in *Cyclopia sp.* tea extracts. PLoS ONE 9: e92128.
- Stefanowicz-Hajduk, J., et al. 2015. Pennogenyl saponins from *Paris quadrifolia L.* induce extrinsic and intrinsic pathway of apoptosis in human cervical cancer HeLa cells. PLoS ONE 10: e0135993.
- Wan, L., et al. 2017. Aloin promotes A549 cell apoptosis via the reactive oxygen species-mitogen activated protein kinase signaling pathway and p53 phosphorylation. Mol. Med. Rep. 16: 5759-5768.

RESEARCH USE

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

PROTOCOLS

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



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.