

caspase-8 (h): 293T Lysate: sc-114794

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.

REFERENCES

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2. Cleveland, J.L., et al. 1995. Contenders in FAS-L/TNF death signaling. *Cell* 81: 479-482.
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4. Medema, J.P., et al. 1997. FLICE is activated by association with the CD95 death-inducing signaling complex (DISC). *EMBO J.* 16: 2794-2804.
5. Srinivasan, A., et al. 1998. Bcl-x_L functions downstream of caspase-8 to inhibit FAS- and tumor necrosis factor receptor 1-induced apoptosis of MCF7 breast carcinoma cells. *J. Biol. Chem.* 273: 4523-4529.
6. Rytomaa, M., et al. 1999. Involvement of FADD and caspase-8 signalling in detachment-induced apoptosis. *Curr. Biol.* 9: 1043-1046.
7. Wesselborg, S., et al. 1999. Anticancer drugs induce caspase-8/FLICE activation and apoptosis in the absence of CD95 receptor/ligand interaction. *Blood* 93: 3053-3063.
8. Watt, W., et al. 1999. The atomic-resolution structure of human caspase-8, a key activator of apoptosis. *Structure* 7: 1135-1143.
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CHROMOSOMAL LOCATION

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

PRODUCT

caspase-8 (h): 293T Lysate represents a lysate of human caspase-8 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

caspase-8 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive caspase-8 antibodies. Recommended use: 10-20 µl per lane.

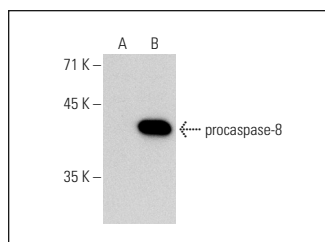
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

caspase-8 (D-8): sc-5263 is recommended as a positive control antibody for Western Blot analysis of enhanced human caspase-8 expression in caspase-8 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

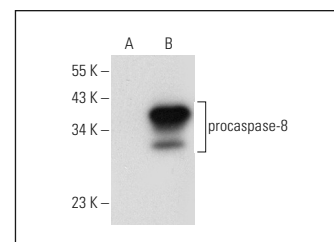
RECOMMENDED SUPPORT REAGENTS

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.

DATA



caspase-8 (D-8): sc-5263. Western blot analysis of procaspase-8 expression in non-transfected: sc-117752 (A) and human caspase-8 transfected: sc-114794 (B) 293T whole cell lysates.



caspase-8 (E-8): sc-166320. Western blot analysis of procaspase-8 expression in non-transfected: sc-117752 (A) and human caspase-8 transfected: sc-114794 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

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.