

caspase-8 p18 (D-7): sc-393776

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, and 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 p18 (D-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 345-374 at the C-terminus of caspase-8 p18 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-393776 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

caspase-8 p18 (D-7) is recommended for detection of p18 subunit and precursor of caspase-8 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 siRNA (m): sc-37226, caspase-8 shRNA Plasmid (h): sc-29930-SH, caspase-8 shRNA Plasmid (m): sc-37226-SH, caspase-8 shRNA (h) Lentiviral Particles: sc-29930-V and caspase-8 shRNA (m) Lentiviral Particles: sc-37226-V.

Molecular Weight of caspase-8 p18 precursor: 55 kDa.

Molecular Weight of caspase-8 p18 subunit: 18 kDa.

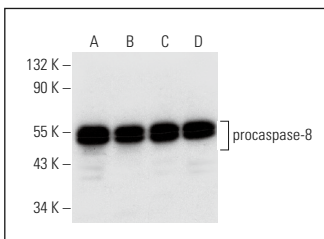
Molecular Weight of caspase-8 p10 subunit: 10 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HL-60 whole cell lysate: sc-2209 or AML-193 whole cell lysate: sc-364182.

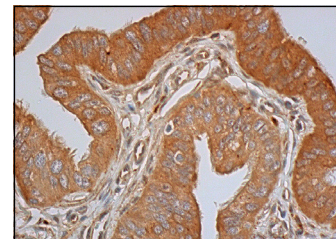
STORAGE

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

DATA



caspase-8 (D-7): sc-393776. Western blot analysis of procaspase-8 expression in Jurkat (A), HL-60 (B), AML-193 (C) and MOLT-4 (D) whole cell lysates.



caspase-8 p18 (D-7): sc-393776. Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Lim, M.C.C., et al. 2017. Pathogen-induced ubiquitin-editing enzyme A20 bifunctionally shuts off NFκB and caspase-8-dependent apoptotic cell death. *Cell Death Differ.* 24: 1621-1631.
- Wang, H., et al. 2020. Involvement of the miR-137-3p/CAPN-2 interaction in ischemia-reperfusion-induced neuronal apoptosis through modulation of p35 cleavage and subsequent caspase-8 overactivation. *Oxid. Med. Cell. Longev.* 2020: 2616871.
- Rashidbaghan, A., et al. 2021. The agglutinin of common nettle (*Urtica dioica L.*) plant effects on gene expression related to apoptosis of human acute myeloid leukemia cell line. *Biochem. Genet.* 59: 1049-1064.
- Dong, Y., et al. 2022. Inhibiting the aberrant PACT-p53 axis activation ameliorates spinal cord ischaemia-reperfusion injury in rats. *Int. Immunopharmacol.* 108: 108745.

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.