

caspase-8 p18 (E-8): sc-166320

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

1. Nagata, S., et al. 1995. The Fas death factor. *Science* 267: 1449-1456.
2. Cleveland, J.L., et al. 1995. Contenders in FasL/TNF death signaling. *Cell* 81: 479-482.

CHROMOSOMAL LOCATION

Genetic locus: CASP8 (human) mapping to 2q33.1; Casp8 (mouse) mapping to 1 C1.3.

SOURCE

caspase-8 p18 (E-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 217-250 at the N-terminus of caspase-8 p18 of human origin.

PRODUCT

Each vial contains 200 µg IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

caspase-8 p18 (E-8) is available conjugated to agarose (sc-166320 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166320 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166320 PE), fluorescein (sc-166320 FITC), Alexa Fluor® 488 (sc-166320 AF488), Alexa Fluor® 546 (sc-166320 AF546), Alexa Fluor® 594 (sc-166320 AF594) or Alexa Fluor® 647 (sc-166320 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166320 AF680) or Alexa Fluor® 790 (sc-166320 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166320 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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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 p18 (E-8) 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 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.

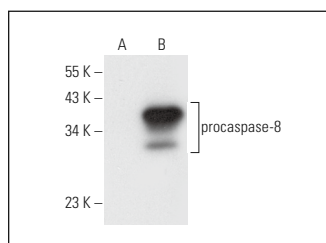
Molecular Weight of caspase-8 precursor: 55 kDa.

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

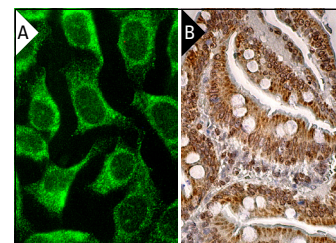
Molecular Weight of caspase-8 p10 subunit: 10 kDa.

Positive Controls: caspase-8 (h): 293T Lysate: sc-114794, Jurkat whole cell lysate: sc-2204 or HL-60 whole cell lysate: sc-2209.

DATA



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.



caspase-8 p18 (E-8): sc-166320. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic and nuclear staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Dirks-Naylor, A.J., et al. 2013. The effects of acute doxorubicin treatment on proteome lysine acetylation status and apical caspases in skeletal muscle of fasted animals. *J. Cachexia Sarcopenia Muscle* 4: 239-243.
2. Mesas, C., et al. 2021. Antitumor effect of the ethanolic extract from seeds of *Euphorbia lathyris* in colorectal cancer. *Nutrients* 13: 566.
3. Mesas, C., et al. 2022. *In vivo* antitumor activity of *Euphorbia lathyris* ethanol extract in colon cancer models. *Biomed. Pharmacother.* 149: 112883.

RESEARCH USE

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