

caspase-8 p18 (G-1): sc-166596

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.
3. Fernandes-Alnemri, T., et al. 1996. *In vitro* activation of CPP32 and Mch3 by Mch4, a novel human apoptotic cysteine protease containing two FADD-like domains. *Proc. Natl. Acad. Sci. USA* 93: 7464-7469.

CHROMOSOMAL LOCATION

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

SOURCE

caspase-8 p18 (G-1) 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 IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

caspase-8 p18 (G-1) is available conjugated to agarose (sc-166596 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166596 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166596 PE), fluorescein (sc-166596 FITC), Alexa Fluor[®] 488 (sc-166596 AF488), Alexa Fluor[®] 546 (sc-166596 AF546), Alexa Fluor[®] 594 (sc-166596 AF594) or Alexa Fluor[®] 647 (sc-166596 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-166596 AF680) or Alexa Fluor[®] 790 (sc-166596 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166596 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

caspase-8 p18 (G-1) 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).

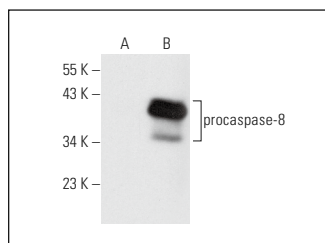
Suitable for use as control antibody for caspase-8 siRNA (h): sc-29930, caspase-8 siRNA (m): sc-37226, caspase-8 siRNA (r): sc-156166, caspase-8 shRNA Plasmid (h): sc-29930-SH, caspase-8 shRNA Plasmid (m): sc-37226-SH, caspase-8 shRNA Plasmid (r): sc-156166-SH, caspase-8 shRNA (h) Lentiviral Particles: 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.

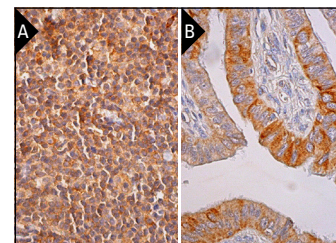
Molecular Weight of caspase-8 p18/p10 subunits: 18/10 kDa.

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

DATA



caspase-8 (G-1): sc-166596. 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 (G-1): sc-166596. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing cytoplasmic staining of cells in non-germinal center (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Lou, Q., et al. 2014. The C-type lectin OCILRP2 costimulates EL4 T cell activation via the DAP12-raf-MAP kinase pathway. *PLoS ONE* 9: e113218.
2. Ge, Y., et al. 2017. Synergistic antitumor effects of CDK inhibitor SNS-032 and an oncolytic adenovirus co-expressing TRAIL and Smac in pancreatic cancer. *Mol. Med. Rep.* 15: 3521-3528.

STORAGE

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

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