

caspase-8 p18 (D-8): sc-5263

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 p18 (D-8) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 217-350 mapping within the p18 subunit of caspase-8 of human origin.

PRODUCT

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

caspase-8 p18 (D-8) is available conjugated to either Alexa Fluor® 546 (sc-5263 AF546) or Alexa Fluor® 594 (sc-5263 AF594), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-5263 AF680) or Alexa Fluor® 790 (sc-5263 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

caspase-8 p18 (D-8) is recommended for detection of p18 subunit and precursor of caspase-8 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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.

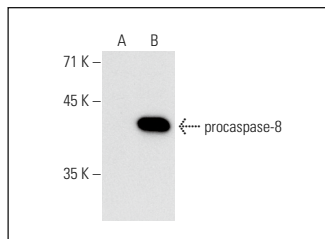
Molecular Weight of caspase-8 precursor: 55 kDa.

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

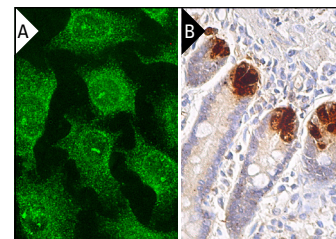
STORAGE

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-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 p18 (D-8): sc-5263. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of Paneth cells (B).

SELECT PRODUCT CITATIONS

- Beer, R., et al. 2001. Temporal and spatial profile of caspase-8 expression and proteolysis after experimental traumatic brain injury. *J. Neurochem.* 78: 862-873.
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- Liao, Y., et al. 2014. Apigenin induces the apoptosis and regulates MAPK signaling pathways in mouse macrophage ANA-1 cells. *PLoS ONE* 9: e92007.
- Chiang, C.Y., et al. 2015. WTC-01, a novel synthetic oxime-flavone compound, destabilizes microtubules in human nasopharyngeal carcinoma cells *in vitro* and *in vivo*. *Br. J. Pharmacol.* 172: 4671-4683.
- Silva, A.M., et al. 2016. The protective effect of regucalcin against radiation-induced damage in testicular cells. *Life Sci.* 164: 31-41.
- Li, X., et al. 2017. New bioactive peptide reduces the toxicity of chemotherapy drugs and increases drug sensitivity. *Oncol. Rep.* 38: 129-140.
- Fan, L., et al. 2018. Upregulation of miR-185 promotes apoptosis of the human gastric cancer cell line MGC803. *Mol. Med. Rep.* 17: 3115-3122.
- Cardoso, H.J., et al. 2019. Tyrosine kinase inhibitor imatinib modulates the viability and apoptosis of castrate-resistant prostate cancer cells dependently on the glycolytic environment. *Life Sci.* 218: 274-283.
- Silva, G.R., et al. 2020. Sweet cherry extract targets the hallmarks of cancer in prostate cells: diminished viability, increased apoptosis and suppressed glycolytic metabolism. *Nutr. Cancer* 72: 917-931.

RESEARCH USE

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