SANTA CRUZ BIOTECHNOLOGY, INC.

caspase-8 (1.1.40): sc-81656

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 actived 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 (1.1.40) is a mouse monoclonal antibody raised against full-length recombinant caspase-8 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

caspase-8 (1.1.40) is available conjugated to agarose (sc-81656 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-81656 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-81656 PE), fluorescein (sc-81656 FITC), Alexa Fluor® 488 (sc-81656 AF488), Alexa Fluor® 546 (sc-81656 AF546), Alexa Fluor® 594 (sc-81656 AF594) or Alexa Fluor® 647 (sc-81656 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-81656 AF680) or Alexa Fluor® 790 (sc-81656 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

caspase-8 (1.1.40) is recommended for detection of caspase-8 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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.

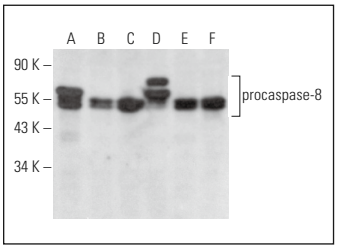
Molecular Weight of caspase-8 p18 subunit: 18 kDa.

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

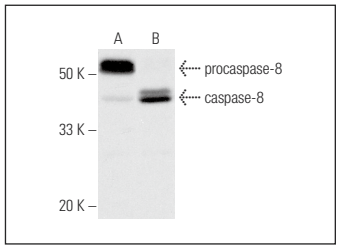
STORAGE

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

DATA



caspase-8 (1.1.40): sc-81656. Western blot analysis of procaspase-8 expression in NCI-H929 (**A**), CCRF-CEM (**B**), MOLT-4 (**C**), HeLa (**D**), HL-60 (**E**) and Jurkat (**F**) whole cell lysates.



caspase-8 (1.1.40): sc-81656. Western blot analysis of caspase-8 cleavage in untreated (**A**) and Staurosporine (sc-3510) treated (**B**) Jurkat whole cell lysates. Note caspase-8 cleavage product expression in lane **B**.

SELECT PRODUCT CITATIONS

1. Tang, L., et al. 2006. Potent activation of mitochondria-mediated apoptosis and arrest in S and M phases of cancer cells by a broccoli sprout extract. Mol. Cancer Ther. 5: 935-944.
2. Zhao, Y.H., et al. 2017. Long non-coding RNA H19 induces hippocampal neuronal apoptosisvia Wnt signaling in a streptozotocin-induced rat model of diabetes mellitus. Oncotarget 8: 64827-64839.
3. Li, X., et al. 2018. Targeting cysteine-rich angiogenic inducer-61 by antibody immunotherapy suppresses growth and migration of non-small cell lung cancer. Exp. Ther. Med. 16: 730-738.
4. Marampon, F., et al. 2019. Histone deacetylase inhibitor ITF2357 (givinostat) reverts transformed phenotype and counteracts stemness in *in vitro* and *in vivo* models of human glioblastoma. J. Cancer Res. Clin. Oncol. 145: 393-409.
5. Zhang, Y., et al. 2020. Small molecule CDS-3078 induces G2/M phase arrest and mitochondria-mediated apoptosis in HeLa cells. Exp. Ther. Med. 20: 284.
6. Al-Hussaini, H., et al. 2021. Effects of *trans*-resveratrol on type 1 diabetes-induced up-regulation of apoptosis and mitogen-activated protein kinase signaling in retinal pigment epithelium of Dark Agouti rats. Eur. J. Pharmacol. 904: 174167.
7. Lee, G.J., et al. 2022. Demethoxycurcumin induces apoptosis via inhibition of NFκB pathway in FaDu human head and neck squamous cell carcinoma. Transl. Cancer Res. 11: 1064-1075.
8. Lohberger, B., et al. 2023. The biological assessment of shikonin and β,β-dimethylacrylshikonin using a cellular myxofibrosarcoma tumor heterogeneity model. Int. J. Mol. Sci. 24: 15910.

RESEARCH USE

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