SANTA CRUZ BIOTECHNOLOGY, INC.

caspase-2_L (F-7): sc-5292

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Caspase-2 (Nedd2, ICH-1) is an aspartate-specific cysteine protease that is activated in response to various apoptotic stimuli. Caspase-2 is unique among the caspases in that it has features of both upstream caspases (long prodomain) and downstream caspases (DEXD substrate specificity). Caspase-2 is highly expressed in the brain during development, and is expressed at low levels in adult tissue. Specifically, caspase-2 localizes to the mitochondria, the Golgi, the cytoplasm and the nucleus. Caspase-2 exists as two isoforms, caspase-2_L and caspase-2_S, which are produced by alternative splicing and differ in their N- and C-termini. Caspase-2_L acts as a positive regulator of apoptosis, whereas caspase-2_S functions as a negative regulator of apoptosis. Following apoptotic stimuli, the caspase-2_L precursor undergoes cleavage at Asp 153 to produce a fragment (p30). The p30 fragment undergoes further cleavage to generate a fragment containing amino acids 153-308 (p18) and a fragment containing amino acids 317-435 (p13 or p14). As apoptosis progresses, the p13 (p14) fragment can undergo further processing to yield a fragment containing amino acids 331-435 (p12).

REFERENCES

1. Wang, L., et al. 1994. Ich-1, an Ice/ced-3-related gene, encodes both positive and negative regulators of programmed cell death. Cell 78: 739-750.
2. Li, H., et al. 1997. Activation of caspase-2 in apoptosis. J. Biol. Chem. 272: 21010-21017.

CHROMOSOMAL LOCATION

Genetic locus: CASP2 (human) mapping to 7q34; Casp2 (mouse) mapping to 6 B2.1.

SOURCE

caspase-2_L (F-7) is a mouse monoclonal antibody raised against amino acids 317-435 mapping at the C-terminus of caspase-2 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-2_L (F-7) is available conjugated to agarose (sc-5292 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-5292 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-5292 PE), fluorescein (sc-5292 FITC), Alexa Fluor® 488 (sc-5292 AF488), Alexa Fluor® 546 (sc-5292 AF546), Alexa Fluor® 594 (sc-5292 AF594) or Alexa Fluor® 647 (sc-5292 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-5292 AF680) or Alexa Fluor® 790 (sc-5292 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

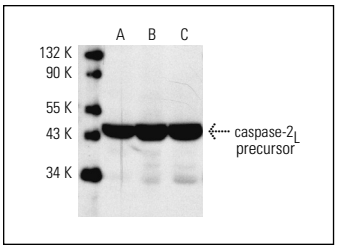
APPLICATIONS

caspase-2_L (F-7) is recommended for detection of p13 subunit, caspase-2_L and full length caspase-2 precursor 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-reactive with the p12 subunit.

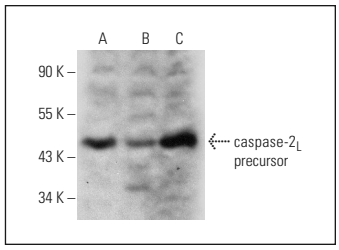
Suitable for use as control antibody for caspase-2 siRNA (h): sc-29236, caspase-2 siRNA (m): sc-29925, caspase-2 siRNA (r): sc-72108, caspase-2 shRNA Plasmid (h): sc-29236-SH, caspase-2 shRNA Plasmid (m): sc-29925-SH, caspase-2 shRNA Plasmid (r): sc-72108-SH, caspase-2 shRNA (h) Lentiviral Particles: sc-29236-V, caspase-2 shRNA (m) Lentiviral Particles: sc-29925-V and caspase-2 shRNA (r) Lentiviral Particles: sc-72108-V.

Molecular Weight of caspase-2_L: 51/13/12 kDa.

DATA



caspase-2_L (F-7): sc-5292. Western blot analysis of caspase-2_L precursor expression in HeLa (**A**), MOLT-4 (**B**) and Jurkat (**C**) whole cell lysates.



caspase-2_L (F-7): sc-5292. Western blot analysis of caspase-2_L precursor expression in Ramos (**A**), Daoy (**B**) and HuT 78 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Montani, V., et al. 1998. Regulation of major histocompatibility class II gene expression in FRTL-5 thyrocytes: opposite effects of interferon and methimazole. Endocrinology 139: 290-302.
2. Wang, Y.H., et al. 2007. Deregulation of AP-1 proteins in collagen gel-induced epithelial cell apoptosis mediated by low substratum rigidity. J. Biol. Chem. 282: 752-763.
3. Chang, Y.H., et al. 2007. Activation of caspase-8 and Erk-1/2 in domes regulates cell death induced by confluence in MDCK cells. J. Cell. Physiol. 211: 174-182.
4. Tee, M.K., et al. 2008. Natural and recombinant human glycodelin activate a proapoptotic gene cascade in monocyte cells. J. Leukoc. Biol. 83: 843-852.
5. Xia, P. and Xu, X.Y. 2017. DKK3 attenuates the cytotoxic effect of natural killer cells on $CD133^+$ gastric cancer cells. Mol. Carcinog. 102: 2100-2110.

RESEARCH USE

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