SANTA CRUZ BIOTECHNOLOGY, INC.

caspase-2_L (C-19): sc-626

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).

CHROMOSOMAL LOCATION

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

SOURCE

caspase-2_L (C-19) is available as either purified rabbit (sc-626) or goat (sc-626-G) polyclonal antibody raised against a peptide mapping at the C-terminus of caspase-2_L of mouse origin.

PRODUCT

Each vial contains either 100 µg (sc-626) or 200 µg (sc-626-G) IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-626 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

caspase-2_L (C-19) is recommended for detection of p13 subunit, p12 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), 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).

caspase-2_L (C-19) is also recommended for detection of p13 subunit, p12 subunit, caspase-2_L and full length caspase-2 precursor in additional species, including equine, canine and bovine.

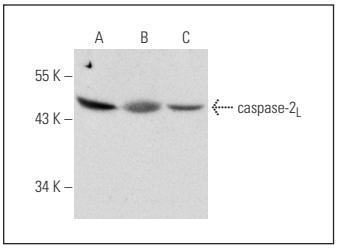
Suitable for use as control antibody for caspase-2 siRNA (h): sc-29236, caspase-2 siRNA (m): sc-29925, caspase-2 shRNA Plasmid (h): sc-29236-SH, caspase-2 shRNA Plasmid (m): sc-29925-SH, caspase-2 shRNA (h) Lentiviral Particles: sc-29236-V and caspase-2 shRNA (m) Lentiviral Particles: sc-29925-V.

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

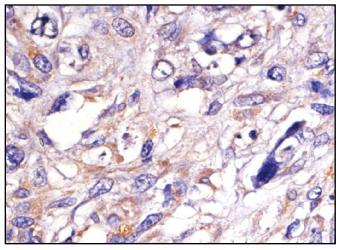
STORAGE

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

DATA



caspase-2_L (C-20)-G: sc-626-G. Western blot analysis of caspase-2_L (ICH-1_L) precursor expression in Jurkat (**A**), HL-60 (**B**) and HuT 78 (**C**) whole cell lysates.



caspase 2_L (C-20)-G: sc-626-G. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human lymphoma tissue showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Srinivasan, A., et al. 1996. Bcl-2 expression in neural cells blocks activation of ICE/CED-3 family proteases during apoptosis. J. Neurosci. 16: 5654-5660.
2. Narkilahti, S., et al. 2007. Increased expression of caspase 2 in experimental and human temporal lobe epilepsy. Neuromolecular Med. 9: 129-144.
3. Peluffo, M.C., et al. 2007. Activity and expression of different members of the caspase family in the rat corpus luteum during pregnancy and postpartum. Am. J. Physiol. Endocrinol. Metab. 293: E1215-E1223.
4. Vinothini, G., et al. 2009. Evaluation of molecular markers in a rat model of mammary carcinogenesis. Oncol. Res. 17: 483-493.
5. Harish Kumar, G., et al. 2010. The neem limonoids azadirachtin and nimbolide inhibit cell proliferation and induce apoptosis in an animal model of oral oncogenesis. Invest. New Drugs 28: 392-401.
6. Manikandan, P., et al. 2011. Eugenol inhibits cell proliferation via NFκB suppression in a rat model of gastric carcinogenesis induced by MNNG. Invest. New Drugs 29: 110-117.
7. Kakisaka, K., et al. 2012. A hedgehog survival pathway in "undead" lipotoxic hepatocytes. J. Hepatol. 57: 844-851

RESEARCH USE

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