

caspase-2 (H-19): sc-623

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 (H-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of caspase-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-623 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

caspase-2 (H-19) is recommended for detection of caspase-2 propeptide, caspase-2_L and caspase-2_S of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 (H-19) is also recommended for detection of caspase-2 propeptide, caspase-2_L and caspase-2_S in additional species, including equine, canine and porcine.

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.

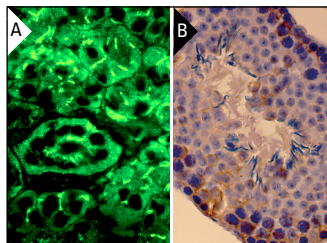
Molecular Weight of caspase-2: 51 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209.

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 (H-19): sc-623. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse testis showing cytoplasmic localization (A). Immunoperoxidase staining of normal mouse lymph node frozen section showing cytoplasmic staining (B).

SELECT PRODUCT CITATIONS

- Mologni, L., et al. 1999. The novel synthetic retinoid 6-[3-adamantyl-4-hydroxyphenyl]-2-naphthalene carboxylic acid (CD437) causes apoptosis in acute promyelocytic leukemia cells through rapid activation of caspases. *Blood* 93: 1045-1061.
- McStay, G.P., et al. 2008. Overlapping cleavage motif selectivity of caspases: implications for analysis of apoptotic pathways. *Cell Death Differ.* 15: 322-331.
- Jayachandran, G., et al. 2010. NPRL2 sensitizes human non-small cell lung cancer (NSCLC) cells to cisplatin treatment by regulating key components in the DNA repair pathway. *PLoS ONE* 5: e11994.
- Viana, R.J., et al. 2010. Modulation of amyloid-β peptide-induced toxicity through inhibition of JNK nuclear localization and caspase-2 activation. *J. Alzheimers Dis.* 22: 557-568.
- Long, Y., et al. 2013. Neurotoxicity of perfluorooctane sulfonate to hippocampal cells in adult mice. *PLoS ONE* 8: e54176.
- Gougelet, A., et al. 2015. Antitumour activity of an inhibitor of miR-34a in liver cancer with β-catenin-mutations. *Gut*. E-published.

RESEARCH USE

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


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Try **caspase-2 (F-2): sc-514472** or **caspase-2 (1C10): sc-53928**, our highly recommended monoclonal alternatives to caspase-2 (H-19).