SANTA CRUZ BIOTECHNOLOGY, INC.

caspase-1 p20 (G-19): sc-1597

BACKGROUND

Caspase-1, originally designated ICE (for IL-1 converting enzyme), is a member of the group of caspases with large prodomains. Caspase-1 promotes maturation of interleukin IL-1 beta and interleukin18 (IL-18) by proteolytic cleavage of precursor forms into biologically active pro-inflamatory cytokines. The prodomain of caspase-1 (also known as Pro-C1) represents the amino acid terminal portion of the caspase-1 precursor. Pro-C1 is produced as a residual component after proteolytic cleavage of the precursor generates the functional caspase-1 subunits known as the p20 and p10 subunits. Active caspase-1, a (p20/p10)2 tetramer, is necessary and sufficient for cleavage of precursor IL-1 as well as for induction of apoptosis in some cell lines. The highly conserved family of caspases mediate many of the morphological and biochemical features of apoptosis, including structural dismantling of cell bodies and nuclei, fragmentation of genomic DNA, destruction of regulatory proteins and propagation of other pro-apoptotic molecules. The human Caspase-1 gene maps to chromosome 2q14 and encodes a cytoplasmic protein expressed in liver, heart, skeletal muscle kidney and testis. Caspase-1 has been implicated in inflammation, septic shock, and other situations such as wound healing and the growth of certain leukemias.

CHROMOSOMAL LOCATION

Genetic locus: Casp1 (mouse) mapping to 9 A1.

SOURCE

caspase-1 p20 (G-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of caspase-1 p20 of mouse 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-1597 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

caspase-1 p20 (G-19) is recommended for detection of p20 subunit and precursor of caspase-1 of mouse and rat 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).

Suitable for use as control antibody for caspase-1 siRNA (m): sc-29922, caspase-1 shRNA Plasmid (m): sc-29922-SH and caspase-1 shRNA (m) Lentiviral Particles: sc-29922-V.

Molecular Weight of caspase-1: 45/20 kDa.

Positive Controls: mouse spleen extract: sc-2391.

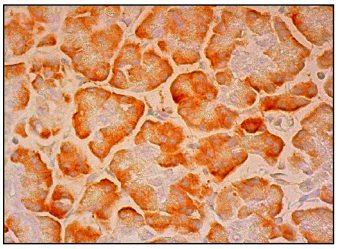
RESEARCH USE

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

STORAGE

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

DATA



caspase-1 p20 (G-19): sc-1597. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells.

SELECT PRODUCT CITATIONS

1. Wu, T., et al. 2003. Light-induced photoreceptor degeneration may involve the NFκB/caspase-1 pathway *in vivo*. Brain Res. 967: 19-26.
2. Kaneko, Y.S., et al. 2005. Peripheral injection of lipopolysaccharide enhances expression of inflammatory cytokines in murine locus coeruleus: possible role of increased norepinephrine turnover. J. Neurochem. 94: 393-404.
3. Wang, M., et al. 2005. Role of endogenous testosterone in myocardial proinflammatory and proapoptotic signaling after acute ischemia-reperfusion. Am. J. Physiol. Heart Circ. Physiol. 288: H221-H226.
4. Wang, M., et al. 2005. p38 mitogen activated protein kinase mediates both death signaling and functional depression in the heart. Ann. Thorac. Surg. 80: 2235-2241.
5. Lu, Y., et al. 2007. Immunological protection against HPV16 E7-expressing human esophageal cancer cell challenge by a novel HPV16-E6/E7 fusion protein based-vaccine in a Hu-PBL-SCID mouse model. Biol. Pharm. Bull. 30: 150-156.
6. Liu, B., et al. 2008. A novel therapeutic fusion protein vaccine by two different families of heat shock proteins linked with HPV16 E7 generates potent antitumor immunity and antiangiogenesis. Vaccine 26: 1387-1396.
7. Wang, Y., et al. 2012. Mifepristone-inducible caspase-1 expression in mouse embryonic stem cells eliminates tumor formation but spares differentiated cells *in vitro* and *in vivo*. Stem Cells 30: 169-179.