

caspase-1 (A-19): sc-622



The Power to Question

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 β and interleukin18 (IL-18) by proteolytic cleavage of precursor forms into biologically active pro-inflammatory cytokines. 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 11q22.3 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/CARD17/CARD16 (human) mapping to 11q22.3.

SOURCE

caspase-1 (A-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of caspase-1 of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

caspase-1 (A-19) is available conjugated either phycoerythrin (sc-622 PE, 200 μ g/ml) or fluorescein (sc-622 FITC, 200 μ g/ml), for IF, IHC(P) and FCM.

Blocking peptide available for competition studies, sc-622 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

caspase-1 (A-19) is recommended for detection of caspase-1 precursor, CARD 17 and COP of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 μ g per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non-crossreactive with caspase-1 p10 or caspase-1 p20.

Molecular Weight of caspase-1: 45 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, HL-60 + LPS cell lysate: sc-24704 or Jurkat whole cell lysate: sc-2204.

RESEARCH USE

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

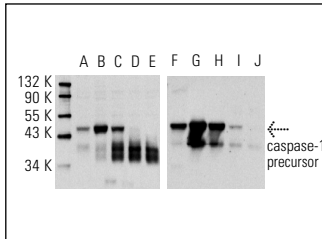
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

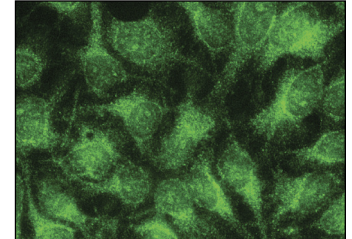
STORAGE

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

DATA



Western blot analysis of caspase-1 (ICE) expression in HL-60 cells treated for zero (A,F), one (B,G), two (C,H), three (D,I) or four (E,J) hours with LPS. Antibodies tested include caspase-1 p10 (C-20): sc-515 (A-E) and caspase-1 (A-19): sc-622 (F-J).



caspase-1 (A-19): sc-622. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Saha, N., et al. 1999. Interleukin-1 β -converting enzyme/caspase-1 in human osteoarthritic tissues: localization and role in the maturation of interleukin-1 β and interleukin-18. *Arthritis Rheum.* 42: 1577-1587.
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Try **caspase-1 (D-3): sc-392736** or **caspase-1 (14F468): sc-56036**, our highly recommended monoclonal alternatives to caspase-1 (A-19). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **caspase-1 (D-3): sc-392736**.