SANTA CRUZ BIOTECHNOLOGY, INC.

ASC (H-120): sc-30153

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Caspase-associated recruitment domains (CARDs) mediate the interaction between adaptor proteins such as APAF1 and the proform of caspases (e.g., CASP9) participating in apoptosis. ASC (apoptosis-associated speck-like protein containing a CARD, also known as TMS1or PYCARD) is a member of the CARD-containing adaptor protein family. ASC is a 195 amino acid protein that contains an N-terminal pyrin-like domain (PYD) and an 87 residue C-terminal CARD. This motif is characteristic of numerous proteins involved in apoptotic signaling. Fluorescence microscopy demonstrates a ring-like expression in some transfected cells. Immunofluorescence microscopy demonstrates that induction of apoptosis causes a CARD-dependent shift from diffuse cytoplasmic expression to punctate or spherical perinuclear aggregates. Western blot analysis shows expression of ASC in leukemia and melanoma cell lines. ASC exhibits intriguing behavior by forming an aggregate and appearing as a speck during apoptosis induced by retinoic acid and other anti-tumor drugs. The ASC gene maps to human chromosome 16p11.2.

REFERENCES

1. Masumoto, J., et al. 1999. ASC, a novel 22 kDa protein, aggregates during apoptosis of human promyelocytic leukemia HL-60 cells. J. Biol. Chem. 274: 33835-33838.
2. Conway, K.E., et al. 2000. TMS1, a novel proapoptotic caspase recruitment domain protein, is a target of methylation-induced gene silencing in human breast cancers. Cancer Res. 60: 6236-6242.

CHROMOSOMAL LOCATION

Genetic locus: PYCARD (human) mapping to 16p11.2.

SOURCE

ASC (H-120) is a rabbit polyclonal antibody raised against amino acids 1-120 mapping at the N-terminus of ASC 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.

APPLICATIONS

ASC (H-120) is recommended for detection of ASC of 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).

Suitable for use as control antibody for ASC siRNA (h): sc-37281, ASC shRNA Plasmid (h): sc-37281-SH and ASC shRNA (h) Lentiviral Particles: sc-37281-V.

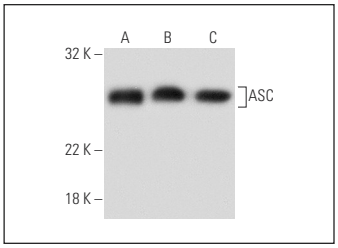
Molecular Weight of ASC: 24 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, SK-MEL-28 cell lysate: sc-2236 or U-937 cell lysate: sc-2239.

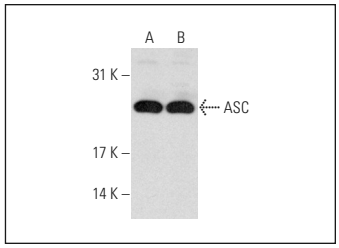
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ASC (H-120): sc-30153. Western blot analysis of ASC expression in U-937 (**A**), SK-MEL-28 (**B**) and K-562 (**C**) whole cell lysates.



ASC (H-120): sc-30153. Western blot analysis of ASC expression in HL-60 (**A**) and SK-MEL-28 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Netea, M.G., et al. 2009. Differential requirement for the activation of the inflammasome for processing and release of IL-1β in monocytes and macrophages. Blood 113: 2324-2335.
2. Carvalho, J.R., et al. 2010. Detailed analysis of expression and promoter methylation status of apoptosis-related genes in prostate cancer. Apoptosis 15: 956-965.

STORAGE

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

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.