SANTA CRUZ BIOTECHNOLOGY, INC.

BAR (P-17): sc-11126

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Two converging apoptotic pathways, which are initiated either through the activation of death domain (DD) receptors by an extrinsic pathway or by an intrinsic pathway in the mitochondria, mediate the activation and progression of apoptosis within the cell. Both these pathways lead to the activation of the serine proteinase cascade (caspases) and to cleavage of these pro-caspases. A novel protein, BAR, for bifunctional apoptosis regulator, contains domains that enable it to interact with components of both major apoptosis pathways, where it negatively regulates apoptotic signaling. Like the other anti-apoptosis proteins BAP31 and FLIP, BAR contains a DED-like domain that is capable of suppressing apoptosis mediated at the receptor level. In addition, BAR contains a domain that also enables it to interact with the mitochondrial Bcl-2 family of proteins. The presence of these various RING, SAM, DED and TM domains suggests that BAR may serve as a scaffold protein that integrates signaling components of the cells apoptosis-regulatory machinery.

REFERENCES

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2. Chao, D.T., et al. 1998. Bcl-2 family: regulators of cell death. Annu. Rev. Immunol. 16: 395-419.
3. Ng, F.W., et al. 1998. Bcl-x_L cooperatively associates with the BAP31 complex in the endoplasmic reticulum, dependent on procaspase-8 and CED-4 adaptor. J. Biol. Chem. 273: 3140-3143.
4. Reed, J.C. 2000. Mechanisms of apoptosis. Am. J. Pathol. 157: 1415-1430.
5. Zhang, H., et al. 2000. BAR: an apoptosis regulator at the intersection of caspases and Bcl-2 family proteins. Proc. Natl. Acad. Sci. USA 97: 2597-2602.
6. Roy, S., et al. 2000. Programmed cell-death regulation: basic mechanisms and therapeutic opportunities. Mol. Med. Today 6: 264-266.
7. Stegh, A.H., et al. 2002. Inactivation of caspase-8 on mitochondria of Bcl-x_L-expressing MCF7-FAS cells: role for the bifunctional apoptosis regulator protein. J. Biol. Chem. 277: 4351-4360.
8. Roth, W., et al. 2003. Bifunctional apoptosis inhibitor (BAR) protects neurons from diverse cell death pathways. Cell Death Differ. 10: 1178-1187.
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CHROMOSOMAL LOCATION

Genetic locus: BFAR (human) mapping to 16p13.12; Bfar (mouse) mapping to 16 A1.

SOURCE

BAR (E-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of BAR of human origin.

RESEARCH USE

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

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-11126 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BAR (P-17) is recommended for detection of BAR 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

BAR (P-17) is also recommended for detection of BAR in additional species, including equine, canine and bovine.

Suitable for use as control antibody for BAR siRNA (h): sc-37291, BAR siRNA (m): sc-37292, BAR shRNA Plasmid (h): sc-37291-SH, BAR shRNA Plasmid (m): sc-37292-SH, BAR shRNA (h) Lentiviral Particles: sc-37291-V and BAR shRNA (m) Lentiviral Particles: sc-37292-V.

Molecular Weight of BAR: 53 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

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