SANTA CRUZ BIOTECHNOLOGY, INC.

Bcl-rambo (N-20): sc-54570

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Apoptosis is defined as a set of cascades which, when initiated, program the cell to undergo lethal changes such as membrane blebbing, mitochondrial breakdown and DNA fragmentation. The Bcl-2 family of proteins plays a central regulatory role in apoptosis. Bcl-rambo, a member of the Bcl-2 family, localizes to the mitochondria and, like other Bcl-2 family members, contains all four BH domains. Although Bcl-rambo shares structural similarity to other Bcl-2 members, it differs from them in its unique C-terminal region. Bcl-rambo has a 250 amino acid sequence containing two tandem repeats that preceeds the membrane anchor region at its C-terminus. Additionally, it is the membrane anchor C-terminal region of Bcl-rambo, not its Bcl-2 homology motifs, that is responsible for its pro-apoptotic activity. Bcl-rambo induces apoptosis when overexpressed and appears to do so by promoting mitochondrial cytochrome c release. It may also facilitate the activation of caspase-3.

REFERENCES

1. Kerr, J.F., Wyllie, A.H. and Currie, A.R. 1972. Apoptosis: a basic biological phenomenon with wide-ranging implications in tissue kinetics. Br. J. Cancer 26: 239-257.
2. Hockenbery, D., Nunez, G., Milliman, C., Schreiber, R.D. and Korsmeyer, S.J. 1990. Bcl-2 is an inner mitochondrial membrane protein that blocks programmed cell death. Nature 348: 334-336.
3. Alnemri, E.S., Robertson, N.M., Fernandes, T.F., Croce, C.M. and Litwack, G. 1992. Overexpressed full length human Bcl-2 extends the survival of baculovirus-infected Sf9 insect cells. Proc. Natl. Acad. Sci. USA 89: 7295-7299.
4. Reed, J.C. 1994. Bcl-2 and the regulation of programmed cell death. J. Cell Biol. 124: 1-6.
5. Yang, J., Liu, X., Bhalla, K., Kim, C.N., Ibrado, A.M., Cai, J., Peng, T.I., Jones, D.P. and Wang, X. 1997. Prevention of apoptosis by Bcl-2: release of cytochrome c from mitochondria blocked. Science 275: 1129-1132.
6. Adams, J.M. and Cory, S. 1998. The Bcl-2 protein family: arbiters of cell survival. Science 281: 1322-1326.
7. Kataoka, T., Holler, N., Micheau, O., Martinon, F., Tinel, A., Hofmann, K. and Tschopp, J. 2001. Bcl-rambo, a novel Bcl-2 homologue that induces apoptosis via its unique C-terminal extension. J. Biol. Chem. 276: 19548-19554.
8. Kaufmann, S.H. and Hengartner, M.O. 2001. Programmed cell death: alive and well in the new millennium. Trends Cell Biol. 11: 526-534.

CHROMOSOMAL LOCATION

Genetic locus: BCL2L13 (human) mapping to 22q11; Bcl2l13 (mouse) mapping to 6 F1.

SOURCE

Bcl-rambo (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Bcl-rambo of human origin.

STORAGE

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

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-54570 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Bcl-rambo (N-20) is recommended for detection of Bcl-rambo of 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).

Suitable for use as control antibody for Bcl-rambo siRNA (h): sc-62015, Bcl-rambo shRNA Plasmid (h): sc-62015-SH and Bcl-rambo shRNA (h) Lentiviral Particles: sc-62015-V.

Molecular Weight of Bcl-rambo: 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.

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.