SANTA CRUZ BIOTECHNOLOGY, INC.

Bcl-rambo (G-9): sc-390598



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

- Kerr, J.F., et al. 1972. Apoptosis: a basic biological phenomenon with wide-ranging implications in tissue kinetics. Br. J. Cancer 26: 239-257.
- 2. Hockenbery, D., et al. 1990. Bcl-2 is an inner mitochondrial membrane protein that blocks programmed cell death. Nature 348: 334-336.
- Alnemri, E.S., et al. 1992. Overexpressed full-length human Bcl-2 extends the survival of baculo-virus-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.

CHROMOSOMAL LOCATION

Genetic locus: BCL2L13 (human) mapping to 22q11.21; Bcl2l13 (mouse) mapping to 6 F1.

SOURCE

Bcl-rambo (G-9) is a mouse monoclonal antibody raised against amino acids 9-112 mapping near the N-terminus of Bcl-rambo of human origin.

PRODUCT

Each vial contains 200 μg lgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Bcl-rambo (G-9) is available conjugated to agarose (sc-390598 AC), 500 μ g/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390598 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390598 PE), fluorescein (sc-390598 FITC), Alexa Fluor[®] 488 (sc-390598 AF488), Alexa Fluor[®] 546 (sc-390598 AF546), Alexa Fluor[®] 594 (sc-390598 AF594) or Alexa Fluor[®] 647 (sc-390598 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-390598 AF680) or Alexa Fluor[®] 790 (sc-390598 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

Bcl-rambo (G-9) is recommended for detection of Bcl-rambo of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for BcI-rambo siRNA (h): sc-62015, BcI-rambo siRNA (m): sc-62016, BcI-rambo shRNA Plasmid (h): sc-62015-SH, BcI-rambo shRNA Plasmid (m): sc-62016-SH, BcI-rambo shRNA (h) Lentiviral Particles: sc-62015-V and BcI-rambo shRNA (m) Lentiviral Particles: sc-62016-V.

Molecular Weight of Bcl-rambo: 53 kDa.

Positive Controls: Bcl-rambo (h2): 293T Lysate: sc-128091, HEL 92.1.7 cell lysate: sc-2270 or K-562 whole cell lysate: sc-2203.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG K BP-HRP: sc-516102 or m-IgG K BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG K BP-FITC: sc-516140 or m-IgG K BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA





Bcl-rambo (G-9): sc-390598. Western blot analysis of Bcl-rambo expression in K-562 (A), HEL 92.1.7 (B), Jurkat (C), HeLa (D), NIH/3T3 (E) and RAW 264.7 (F) whole cell lysates. Bcl-rambo (G-9): sc-390598. Western blot analysis of Bcl-rambo expression in non-transfected 2931: sc-117752 (**A**), human Bcl-rambo transfected 2931: sc-128091 (**B**) and K-562 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

- Malena, A., et al. 2016. Mitochondrial quality control: cell-type-dependent responses to pathological mutant mitochondrial DNA. Autophagy 12: 2098-2112.
- Meng, F., et al. 2021. Down-regulation of BCL2L13 renders poor prognosis in clear cell and papillary renal cell carcinoma. Cancer Cell Int. 21: 332.

STORAGE

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