SANTA CRUZ BIOTECHNOLOGY, INC.

Bcl-G (F-8): sc-393715

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. Bcl-2 is one of many key regulators of apoptosis that are essential for proper development, tissue homeostasis and protection against foreign pathogens. Bcl-G, also known as BCL2L14 (BCL2-like 14) or BCLG, is a 327 amino acid cytoplasmic protein that belongs to the Bcl-2 family of apoptosis-regulating proteins. Bcl-G is expressed as three alternatively spliced transcripts designated short, medium and long. The short isoform is testis-specific and localizes to cytosolic organelles, while the long isoform is widely expressed and is distributed throughout the cytosol. Overexpression of Bcl-G induces apoptosis in cells, suggesting a possible role for Bcl-G in tumor suppression.

REFERENCES

1. Guo, B., et al. 2001. Bcl-G, a novel pro-apoptotic member of the Bcl-2 family. J. Biol. Chem. 276: 2780-2785.
2. Ozalp, S.S., et al. 2002. Bcl-2 expression in preinvasive and invasive cervical lesions. Eur. J. Gynaecol. Oncol. 23: 419-422.
3. Abdelhaleem, M., et al. 2006. A novel TEL-AML1 fusion transcript involving the pro-apoptotic gene Bcl-G in pediatric precursor B acute lymphoblastic leukemia. Leukemia 20: 1294-1294.
4. Nakamura, M. and Yamaguchi, S. 2006. The ubiquitin-like protein MNSFβ regulates ERK-MAPK cascade. J. Biol. Chem. 281: 16861-16869.
5. Soung, Y.H., et al. 2006. BH3 domain mutation of proapoptotic genes Bad, Bmf and Bcl-G is rare in transitional cell carcinomas of the urinary bladder. Pathology 38: 33-34.
6. Yoo, N.J., et al. 2007. Mutational analysis of the BH3 domains of proapoptotic Bcl-2 family genes Bad, Bmf and Bcl-G in laryngeal squamous cell carcinomas. Tumori 93: 195-197.
7. Lin, M.L., et al. 2007. Involvement of maternal embryonic leucine zipper kinase (MELK) in mammary carcinogenesis through interaction with Bcl-G, a pro-apoptotic member of the Bcl-2 family. Breast Cancer Res. 9: R17.

CHROMOSOMAL LOCATION

Genetic locus: BCL2L14 (human) mapping to 12p13.2.

SOURCE

Bcl-G (F-8) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of Bcl-G of human origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

Bcl-G (F-8) is recommended for detection of Bcl-G of human origin by Western Blotting (starting dilution 1:100, 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 Bcl-G siRNA (h): sc-72631, Bcl-G shRNA Plasmid (h): sc-72631-SH and Bcl-G shRNA (h) Lentiviral Particles: sc-72631-V.

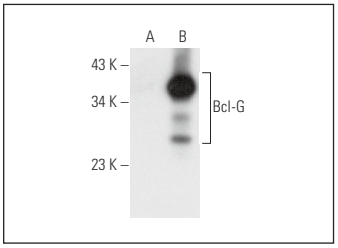
Molecular Weight of Bcl-G: 30 kDa.

Positive Controls: Bcl-G (h): 293T Lysate: sc-114123.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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-G (F-8): sc-393715. Western blot analysis of Bcl-G expression in non-transfected: sc-117752 (**A**) and human Bcl-G transfected: sc-114123 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Mei, A.H., et al. 2020. MAGE-A inhibit apoptosis and promote proliferation in multiple myeloma through regulation of BIM and $p21^{Cip1}$. Oncotarget 11: 727-739.

RESEARCH USE

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

PROTOCOLS

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