

Bak (AT38E2): sc-517390

BACKGROUND

The Bcl-2 family of proteins is characterized by its ability to modulate cell death (apoptosis) under a broad range of physiologic conditions. Bcl-2 and several related proteins function to inhibit apoptosis, while other members of the Bcl-2 family, such as Bax, accelerate death under various conditions. One member of the Bcl-2 family, designated Bak, functions primarily to enhance apoptotic cell death following appropriate activating signals and counteracts the protection from apoptosis provided by Bcl-2. Expression of Bak is widespread in a broad range of cells, including various long-lived, terminally differentiated cell types, suggesting that its cell-death-inducing activity is broadly distributed and that the regulation of inhibitors of apoptosis may represent an important determinant of tissue-specific modulation of apoptosis.

CHROMOSOMAL LOCATION

Genetic locus: BAK1 (human) mapping to 6p21.31.

SOURCE

Bak (AT38E2) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 29-187 of Bak of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide, 1% glycerol, and 0.1% gelatin.

APPLICATIONS

Bak (AT38E2) is recommended for detection of Bak 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), flow cytometry (1 µg per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Bak siRNA (h): sc-29786, Bak shRNA Plasmid (h): sc-29786-SH and Bak shRNA (h) Lentiviral Particles: sc-29786-V.

Molecular Weight of Bak: 30 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, Jurkat whole cell lysate: sc-2204 or MOLT-4 cell lysate: sc-2233.

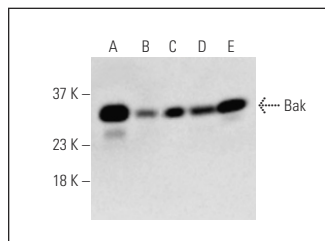
RECOMMENDED SUPPORT REAGENTS

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.

STORAGE

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

DATA



Bak (AT38E2): sc-517390. Western blot analysis of Bak expression in A-431 (A), Jurkat (B), MOLT-4 (C), Hep G2 (D) and THP-1 (E) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM.

SELECT PRODUCT CITATIONS

- Lin, M.W., et al. 2018. 2-phenyl-4-quinolone (YT-1) induces G₂/M phase arrest and an intrinsic apoptotic mechanism in human leukemia cells. *Oncol. Rep.* 39: 1331-1337.
- Zhang, Y., et al. 2019. CDS-1548 induces apoptosis in HeLa cells by activating caspase 3. *Oncol. Lett.* 18: 1881-1887.
- Wu, Z., et al. 2019. Synchronous co-expression of Id-1 and nuclear NFκB p65 promotes cervical cancer progression and malignancy, and is associated with a poor prognosis and chemosensitivity. *Oncol. Rep.* 42: 2075-2086.
- Guo, Z., et al. 2020. Using CETSA assay and a mathematical model to reveal dual Bcl-2/Mcl-1 inhibition and on-target mechanism for ABT-199 and S1. *Eur. J. Pharm. Sci.* 25: 105105.
- Cucarull, B., et al. 2020. Regorafenib alteration of the Bcl-x_L/MCL-1 ratio provides a therapeutic opportunity for BH3-mimetics in hepatocellular carcinoma models. *Cancers* 12: 332.
- Zhang, Y., et al. 2020. Small molecule CDS-3078 induces G₂/M phase arrest and mitochondria-mediated apoptosis in HeLa cells. *Exp. Ther. Med.* 20: 284.
- Wanyan, Y.K., et al. 2020. 2-deoxy-d-glucose promotes buforin IIb-induced cytotoxicity in prostate cancer DU145 cells and xenograft tumors. *Molecules* 25: 5778.
- Pham, C.H., et al. 2021. Anticancer effects of propionic acid inducing cell death in cervical cancer cells. *Molecules* 26: 4951.
- Komatsu, M., et al. 2022. Aberrant GIMAP2 expression affects oral squamous cell carcinoma progression by promoting cell cycle and inhibiting apoptosis. *Oncol. Lett.* 23: 49.

RESEARCH USE

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