

# Bak (C-3): sc-518110

## 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, in addition, 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.

## REFERENCES

1. Tsujimoto, Y., et al. 1985. The t(14;18) chromosome translocations involved in B cell neoplasms results from mistakes in VDJ joining. *Science* 229: 1390-1393.
2. Bakhshi, A., et al. 1985. Cloning the chromosomal breakpoint of t(14;18) human lymphomas: clustering around JH on chromosome 14 and near a transcriptional unit on 18. *Cell* 41: 899-906.
3. Hockenbery, D.M., et al. 1991. Bcl-2 protein is topographically restricted in tissues characterized by apoptotic cell death. *Proc. Natl. Acad. Sci. USA* 88: 6961-6965.
4. Oltvai, Z.N., et al. 1993. Bcl-2 heterodimerizes *in vivo* with a conserved homolog, Bax, that accelerates programmed cell death. *Cell* 74: 609-619.
5. Yin, X.M., et al. 1994. BH1 and BH2 domains of Bcl-2 are required for inhibition of apoptosis and heterodimerization with Bax. *Nature* 369: 321-323.

## CHROMOSOMAL LOCATION

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

## SOURCE

Bak (C-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 72-94 within an internal region of Bak of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Bak (C-3) is available conjugated to agarose (sc-518110 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518110 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518110 PE), fluorescein (sc-518110 FITC), Alexa Fluor® 488 (sc-518110 AF488), Alexa Fluor® 546 (sc-518110 AF546), Alexa Fluor® 594 (sc-518110 AF594) or Alexa Fluor® 647 (sc-518110 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518110 AF680) or Alexa Fluor® 790 (sc-518110 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

Bak (C-3) is recommended for detection of Bak 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 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.

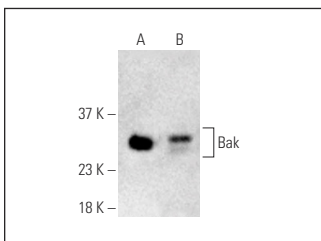
Positive Controls: A-431 whole cell lysate: sc-2201 or THP-1 cell lysate: sc-2238.

## RECOMMENDED SUPPORT REAGENTS

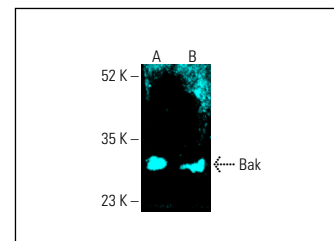
To ensure optimal results, the following support reagents are recommended:

- 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



Bak (C-3): sc-518110. Western blot analysis of Bak expression in A-431 (A) and THP-1 (B) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM.



Bak (C-3): sc-518110. Fluorescent western blot analysis of Bak expression in A-431 (A) and THP-1 (B) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG<sub>1</sub> BP-CFL 647: sc-533664.

## SELECT PRODUCT CITATIONS

1. Han, X., et al. 2021. Zika virus infection induced apoptosis by modulating the recruitment and activation of pro-apoptotic protein Bax. *J. Virol.* 95: e01445-20.

## STORAGE

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

## RESEARCH USE

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