

# Bim (Ham 151-149): sc-130511

## BACKGROUND

Pro-apoptotic Bcl-2 family members promote cell death by neutralizing their anti-apoptotic relatives, which otherwise maintain cell viability by regulating caspase activity. Bim belongs to the BH3-only subgroup of Bcl-2-related proteins and exists in three distinct isoforms, Bim<sub>S</sub> (short), Bim<sub>L</sub> (long) and Bim<sub>EL</sub> (extra long). ERK 1/2 phosphorylates Bim<sub>EL</sub>, resulting in rapid degradation of the isoform via the proteasome pathway. At least three sites for ERK 1/2 phosphorylation exist on Bim<sub>EL</sub>, whereas ERK 1/2 does not effect Bim<sub>S</sub> and Bim<sub>L</sub>, implying a unique role for Bim<sub>EL</sub> in cell survival signaling.

## REFERENCES

1. O'Reilly, L.A., et al. 2000. The proapoptotic BH3-only protein Bim is expressed in hematopoietic, epithelial, neuronal, and germ cells. *Am. J. Pathol.* 157: 449-461.
2. Seward, R.J., et al. 2003. Phosphorylation of the pro-apoptotic protein Bim in lymphocytes is associated with protection from apoptosis. *Mol. Immunol.* 39: 983-993.
3. Luciano, F., et al. 2003. Phosphorylation of Bim<sub>EL</sub> by ERK 1/2 on Serine 69 promotes its degradation via the proteasome pathway and regulates its proapoptotic function. *Oncogene* 22: 6785-6793.
4. Ley, R., et al. 2004. Extracellular signal-regulated kinases 1/2 are serum-stimulated "Bim<sub>EL</sub> kinases" that bind to the BH3-only protein Bim<sub>EL</sub> causing its phosphorylation and turnover. *J. Biol. Chem.* 279: 8837-8847.
5. Harada, H., et al. 2004. Survival factor-induced extracellular signal-regulated kinase phosphorylates Bim, inhibiting its association with BAX and proapoptotic activity. *Proc. Natl. Acad. Sci. USA* 101: 15313-15317.
6. Gomez-Bougie, P., et al. 2004. The imbalance between Bim and Mcl-1 expression controls the survival of human myeloma cells. *Eur. J. Immunol.* 34: 3156-3164.
7. Herrant, M., et al. 2004. Cleavage of Mcl-1 by caspases impaired its ability to counteract Bim-induced apoptosis. *Oncogene* 23: 7863-7873.
8. Wang, P., et al. 2004. Bim is an apoptosis sensor that responds to loss of survival signals delivered by epidermal growth factor but not those provided by integrins. *J. Biol. Chem.* 279: 41280-41285.
9. Kuribara, R., et al. 2004. Roles of Bim in apoptosis of normal and Bcr-Abl-expressing hematopoietic progenitors. *Mol. Cell. Biol.* 24: 6172-6183.

## CHROMOSOMAL LOCATION

Genetic locus: Bcl2l1 (mouse) mapping to 2 F1.

## SOURCE

Bim (Ham 151-149) is a Armenian hamster monoclonal antibody raised against a Bim and Bcl-x<sub>L</sub> complex of mouse 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<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Bim (Ham 151-149) is available conjugated to either phycoerythrin (sc-130511 PE) or fluorescein (sc-130511 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

## APPLICATIONS

Bim (Ham 151-149) is recommended for detection of Bim of mouse origin by immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1 µg per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for Bim siRNA (m): sc-29803, Bim shRNA Plasmid (m): sc-29803-SH and Bim shRNA (m) Lentiviral Particles: sc-29803-V.

Molecular Weight of Bim<sub>S</sub>: 19 kDa.

Molecular Weight of Bim<sub>L</sub>: 21 kDa.

Molecular Weight of Bim<sub>EL</sub>: 24 kDa.

## SELECT PRODUCT CITATIONS

1. Wu, W., et al. 2018. Vernodalol mediates antitumor effects in acute promyelocytic leukemia cells. *Oncol. Lett.* 15: 2227-2235.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



See **Bim (H-5): sc-374358** for Bim antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.