SANTA CRUZ BIOTECHNOLOGY, INC.

Bim (m2): 293T Lysate: sc-126502

BACKGROUND

Pro-apototic 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_S (short), Bim_L (long) and Bim_{EL} (extra long). ERK 1/2 phosphorylates Bim_{EL}, resulting in rapid degradation of the isoform via the proteasome pathway. At least three sites for ERK 1/2 phosphorylation exist on Bim_{EL}, whereas ERK 1/2 does not effect Bim_S and Bim_L, implying a unique role for Bim_{EL} in cell survival signaling.

REFERENCES

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3. Luciano F., et al. 2003. Phosphorylation of Bim_{EL} 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_{EL} kinases" that bind to the BH3-only protein Bim_{EL} 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.
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CHROMOSOMAL LOCATION

Genetic locus: Bcl2l11 (mouse) mapping to 2 F1.

PRODUCT

Bim (m2): 293T Lysate represents a lysate of mouse Bim transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

Bim (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Bim antibodies. Recommended use: 10-20 µl per lane.

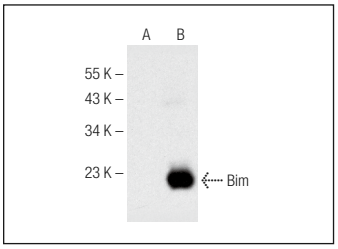
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Bim (H-5): sc-374358 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Bim expression in Bim transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



Bim (H-5): sc-374358. Western blot analysis of Bim expression in non-transfected: sc-117752 (**A**) and mouse Bim transfected: sc-126502 (**B**) 293T whole cell lysates.

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.