

#4585 Store at -20°C

Phospho-Bim (Ser69) (D7E11) Rabbit mAb



- Small 100 µl (10 western blots)
- Petite 40 µl (4 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP Endogenous	H, M, (R, Mk, Dg, Ct)	26 kDa	Rabbit IgG**

Background: Bim/Bod is a pro-apoptotic protein belonging to the BH3-only group of Bcl-2 family members including Bad, Bid, Bik, Hrk and Noxa that contain a BH3 domain but lack other conserved BH1 or BH2 domains (1,2). Bim induces apoptosis by binding to and antagonizing anti-apoptotic members of the Bcl-2 family. Interactions have been observed with Bcl-2, Bcl-xL, Mcl-1, Bcl-w, Bfl-1 and BHRF-1 (1,2). Bim functions in regulating apoptosis associated with thymocyte negative selection and following growth factor withdrawal, during which Bim expression is elevated (3-6). Three major isoforms of Bim are generated by alternative splicing: Bim_{EL}, Bim_L and Bim_S (1). The shortest form, Bim_S, is the most cytotoxic and is generally only transiently expressed during apoptosis. The Bim_{EL} and Bim_L isoforms may be sequestered to the dynein motor complex through an interaction with the dynein light chain and released from this complex during apoptosis (7). Apoptotic activity of these longer isoforms may be regulated by phosphorylation (8,9). Environmental stress triggers Bim phosphorylation by JNK and results in its dissociation from the dynein complex and increased apoptotic activity.

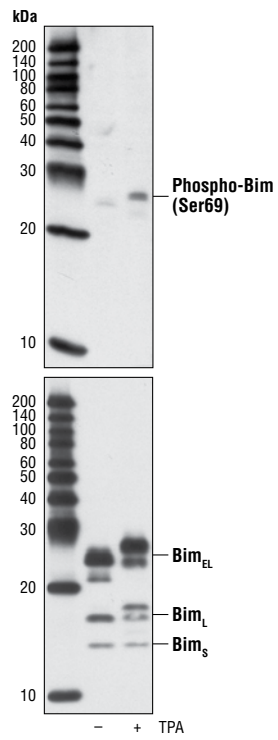
ERK1/2-dependent phosphorylation of Bim_{EL} at Ser69 (Ser65 in mouse and rat) in response to growth factor stimulation can promote its proteasome-mediated degradation and enhance cell survival (6,10,11).

Specificity/Sensitivity: Phospho-Bim (Ser69) (D7E11) Rabbit mAb detects endogenous levels of Bim protein only when phosphorylated at Ser69.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser69 of human Bim protein.

Background References:

- (1) O'Connor, L. et al. (1998) *EMBO J* 17, 384–95.
- (2) Hsu, S.Y. et al. (1998) *Mol Endocrinol* 12, 1432–40.
- (3) Bouillet, P. et al. (2002) *Nature* 415, 922–6.
- (4) Whitfield, J. et al. (2001) *Neuron* 29, 629–43.
- (5) Dijkers, P.F. et al. (2000) *Curr Biol* 10, 1201–4.
- (6) Ley, R. et al. (2003) *J Biol Chem* 278, 18811–6.
- (7) Puthalakath, H. et al. (1999) *Mol Cell* 3, 287–96.
- (8) Lei, K. and Davis, R.J. (2003) *Proc Natl Acad Sci USA* 100, 2432–7.
- (9) Putcha, G.V. et al. (2003) *Neuron* 38, 899–914.
- (10) Luciano, F. et al. (2003) *Oncogene* 22, 6785–93.
- (11) Marani, M. et al. (2004) *Oncogene* 23, 2431–41.



Western blot analysis of extracts from Raji cells, untreated or TPA-treated for 30 min, using Phospho-Bim (Ser69) (D7E11) Rabbit mAb (upper), or total Bim (C34C5) Rabbit mAb #2933 (lower).

Entrez-Gene ID #10018
Swiss-Prot Acc. #043521

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide

Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine

Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.