Revision 1

#4585 Store at -20C

# Phospho-Bim (Ser69) (D7E11) Rabbit mAb

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---|---|---|---|---|---|---|
| WB, IP | H M | Endogenous | 26 | Rabbit IgG | #O43521 | 10018 |

## Product Usage Information

| Application | Dilution |
|---|---|
| Western Blotting | 1:1000 |
| Immunoprecipitation | 1:50 |

## 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.

## Specificity / Sensitivity

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

## Species predicted to react based on 100% sequence homology:

Rat, Monkey, Dog

## Source / Purification

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

## 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.
ERK 1/2-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).

## 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 U S A* 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.

## Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

## Western Blot Buffer

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

**Applications Key**

**WB:** Western Blotting **IP:** Immunoprecipitation

**Cross-Reactivity Key**

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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 **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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