

Phospho-Bim (Ser77) (D4H12) Rabbit mAb

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

Applications: W, IP	Reactivity: H M	Sensitivity: Endogenous	MW (kDa): 26	Source/Isotype: Rabbit IgG	UniProt ID: #O43521	Entrez-Gene Id: 10018
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Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:100

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 (Ser77) (D4H12) Rabbit mAb recognizes endogenous levels of Bim protein only when phosphorylated at Ser77.

Species predicted to react based on 100% sequence homology

Monkey

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser77 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. MAP kinase dependent phosphorylation of Bim at multiple sites, including Ser55, Ser65, and Ser73 in mouse (Ser59, Ser69, and Ser77 in human), can promote proteasomal degradation of Bim and inhibition of apoptosis (10).

Background References

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- Bouillet, P. et al. (2002) *Nature* 415, 922-6.
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- Dijkers, P.F. et al. (2000) *Curr Biol* 10, 1201-4.
- Ley, R. et al. (2003) *J Biol Chem* 278, 18811-6.
- Puthalakath, H. et al. (1999) *Mol Cell* 3, 287-96.
- Lei, K. and Davis, R.J. (2003) *Proc Natl Acad Sci U S A* 100, 2432-7.
- Putcha, G.V. et al. (2003) *Neuron* 38, 899-914.
- Hübner, A. et al. (2008) *Mol Cell* 30, 415-25.

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

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse

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