Revision 3

Store at -20C

#60434

Bim (C34C5) Rabbit mAb (Biotinylated)

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355) orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	12, 15, 23	Rabbit IgG	#O43521	10018

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 140 mM NaCl, 3 mM KCl, 10 mM sodium phosphate (pH 7.4) dibasic, 2 mM potassium phosphate monobasic, 2 mg/mL BSA, and 50% glycerol. Store at –20°C. *Do not aliquot the antibody.*

Specificity/Sensitivity

Bim (C34C5) Rabbit mAb (Biotinylated) detects endogenous levels of total Bim (EL, L, and S isoforms) protein.

Species predicted to react based on 100% sequence homology

Monkey, Bovine, Dog, Pig

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro25 of Bim protein.

Description

This Cell Signaling Technology antibody is conjugated to biotin under optimal conditions. The biotinylated antibody is expected to exhibit the same species cross-reactivity as the unconjugated Bim (C34C5) Rabbit mAb #2933.

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.

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.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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