

# Phospho-Bim (Ser55) Antibody

- Small 100  $\mu$ l  
(10 western blots)
- Petite 40  $\mu$ l  
(4 western blots)

- Orders** ■ 877-616-CELL (2355)  
orders@cellsignaling.com
- Support** ■ 877-678-TECH (8324)  
info@cellsignaling.com
- Web** ■ www.cellsignaling.com

rev. 02/17/10

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.

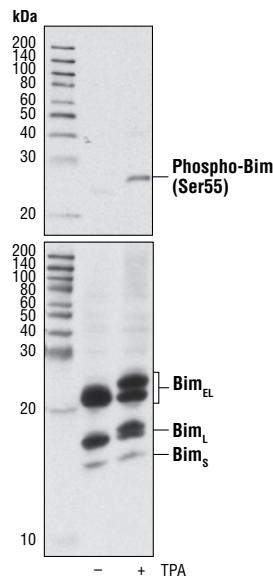
| Applications    | Species Cross-Reactivity* | Molecular Wt. | Source   |
|-----------------|---------------------------|---------------|----------|
| W<br>Endogenous | M, (H, R)                 | 26 kDa        | Rabbit** |

**Background:** Bim/Bod is a pro-apoptotic protein belonging to the BH3-only group of Bcl-2 family members (that includes Bad, Bid, Bik, Hrk and Noxa) that contain a BH3 domain but lacking 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<sub>EL</sub>, Bim<sub>L</sub> and Bim<sub>S</sub> (1). The shortest form, Bim<sub>S</sub>, is the most cytotoxic and is generally only transiently expressed during apoptosis. The Bim<sub>EL</sub> and Bim<sub>L</sub> isoforms may be sequestered to the dynein motor complex through an interaction with 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 dissociation from the dynein complex and increased apoptotic activity.

Survival factor induced ERK activation leads to phosphorylation of mouse Bim at Ser55, which inhibits its pro-apoptotic activity and association with Bax (10).

**Specificity/Sensitivity:** Phospho-Bim (Ser55) Antibody detects endogenous levels of mouse Bim protein only when phosphorylated at Ser55. This site is conserved in rat (Ser55) and human (Ser59) but phosphorylation has not been detected in these species.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser55 of mouse Bim. Antibodies were purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from A20 cells, untreated or TPA-treated for 30 minutes, using Phospho-Bim (Ser55) Antibody (upper) or Bim Antibody #2819 (lower).

Entrez-Gene ID #10018  
Swiss-Prot Acc. #O43521

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA and 50% glycerol. 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

#### Background References:

- O'Connor, L. et al. (1998) *EMBO J.* 17, 384–395.
- Hsu, S.Y. et al. (1998) *Mol. Endocrinol.* 12, 1432–1440.
- Bouillet, P. et al. (2002) *Nature* 415, 922–926.
- Whitfield, J. et al. (2001) *Neuron* 29, 629–643.
- Dijkers, P.F. et al. (2000) *Curr. Biol.* 10, 1201–1204.
- Ley, R. et al. (2003) *J. Cell Biol.* 278, 18811–18816.
- Puthalakath, H. et al. (1999) *Mol. Cell* 3, 287–296.
- Lei, K. and Davis, R.J. (2003) *Proc. Natl. Acad. Sci. USA* 100, 2432–2437.
- Putcha, G.V. et al. (2003) *Neuron* 38, 899–914.
- Harada, H. et al. (2004) *Proc Natl Acad Sci USA* 101, 15313–15317

**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.