Revision 3

Store at -20C

#9296

Phospho-Bad (Ser112) (7E11) Mouse mAb

Cell Signaling TECHNOLOGY®

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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:
W	H M R Mk	Endogenous	23	Mouse IgG1	#Q92934	572

Product Usage Information

Application	Dilution
Western Blotting	1:2000

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.

For a carrier free (BSA and azide free) version of this product see product #48694.

Specificity/Sensitivity

Phospho-Bad (Ser112) (7E11) Mouse mAb detects endogenous levels of Bad only when phosphorylated at serine112. The Ser112 nomenclature is based upon the mouse sequence. The analogous phosphorylation site is Ser75 in human and Ser113 in rat. This antibody does not detect Bad phosphorylated at other sites, nor does it detect related family members.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser112 of mouse Bad.

Background

Bad is a proapoptotic member of the Bcl-2 family that promotes cell death by displacing Bax from binding to Bcl-2 and Bcl-xL (1,2). Survival factors, such as IL-3, inhibit the apoptotic activity of Bad by activating intracellular signaling pathways that result in the phosphorylation of Bad at Ser112 and Ser136 (2). Phosphorylation at these sites promotes binding of Bad to 14-3-3 proteins to prevent an association between Bad with Bcl-2 and Bcl-xL (2). Akt phosphorylates Bad at Ser136 to promote cell survival (3,4). Bad is phosphorylated at Ser112 both *in vivo* and *in vitro* by p90RSK (5,6) and mitochondria-anchored PKA (7). Phosphorylation at Ser155 in the BH3 domain by PKA plays a critical role in blocking the dimerization of Bad and Bcl-xL (8-10).

Background References

1. Yang, E. et al. (1995) *Cell* 80, 285-291.
2. Zha, J. et al. (1996) *Cell* 87, 619-628.
3. Datta, S.R. et al. (1997) *Cell* 91, 231-241.
4. Peso, L. et al. (1997) *Science* 278, 687-689.
5. Bonni, A. et al. (1999) *Science* 286, 1358-1362.
6. Tan, Y. et al. (1999) *J. Biol. Chem.* 274, 34859-34867.
7. Harada, H. et al. (1999) *Mol. Cell* 3, 413-422.
8. Tan, Y. et al. (2000) *J. Biol. Chem.* 275, 25865-25869.
9. Lizcano, J. et al. (2000) *Biochem. J.* 349, 547-557.
10. Datta, S. et al. (2000) *Mol. Cell* 6, 41-51.

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

Cross-Reactivity Key

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

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Limited Uses

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