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## Phospho-Bad (Ser112) (40A9) Rabbit mAb (PE Conjugate)

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

<b>Applications:</b> FC-FP	<b>Reactivity:</b> H M R Mk	<b>Sensitivity:</b> Endogenous	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #Q92934	<b>Entrez-Gene Id:</b> 572
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<b>Product Usage Information</b>	<b>Application</b> Flow Cytometry (Fixed/Permeabilized)	<b>Dilution</b> 1:50
<b>Storage</b>	Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibodies. Protect from light. Do not freeze.	
<b>Specificity/Sensitivity</b>	Phospho-Bad (Ser112) (40A9) Rabbit mAb (PE Conjugate) detects endogenous levels of Bad only when phosphorylated at Ser112. 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.	
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser112 of mouse Bad.	
<b>Description</b>	This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in monkey cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated Phospho-Bad (Ser112) (40A9) Rabbit mAb #5284.	
<b>Background</b>	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 <i>in vivo</i> and <i>in vitro</i> 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).	
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Yang, E. et al. (1995) <i>Cell</i> 80, 285-291.</li> <li>2. Zha, J. et al. (1996) <i>Cell</i> 87, 619-628.</li> <li>3. Datta, S.R. et al. (1997) <i>Cell</i> 91, 231-241.</li> <li>4. Peso, L. et al. (1997) <i>Science</i> 278, 687-689.</li> <li>5. Bonni, A. et al. (1999) <i>Science</i> 286, 1358-1362.</li> <li>6. Tan, Y. et al. (1999) <i>J. Biol. Chem.</i> 274, 34859-34867.</li> <li>7. Harada, H. et al. (1999) <i>Mol. Cell</i> 3, 413-422.</li> <li>8. Tan, Y. et al. (2000) <i>J. Biol. Chem.</i> 275, 25865-25869.</li> <li>9. Lizcano, J. et al. (2000) <i>Biochem. J.</i> 349, 547-557.</li> <li>10. Datta, S. et al. (2000) <i>Mol. Cell</i> 6, 41-51.</li> </ol>	

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Applications Key</b>	<b>FC-FP:</b> Flow Cytometry (Fixed/Permeabilized)
<b>Cross-Reactivity Key</b>	<b>H:</b> Human <b>M:</b> Mouse <b>R:</b> Rat <b>Mk:</b> Monkey
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