

# Bad Control Proteins

✓ 100 µl  
(10 Western mini-blot)



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**For Research Use Only. Not For Use In Diagnostic Procedures.**

Product Includes	Product #	Quantity
Bad Control Protein (Nonphosphorylated)	81341	100 ul
Bad Control Protein (Phosphorylated)	18620	100 ul

**Description:** *Bad Control Protein (Nonphosphorylated):* Nonphosphorylated Bad peptide fusion serves as a negative control. Supplied in SDS Sample Buffer.

*Bad Control Protein (Phosphorylated):* Phosphorylated Bad peptide fusion serves as a positive control. Supplied in SDS Sample Buffer.

**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 resulting in the phosphorylation of Bad at Ser112 and Ser136 (2). Phosphorylation at these sites prevents the association between Bad and Bcl-2 and Bcl-xL by promoting the binding of Bad to 14-3-3 protein (2). Akt promotes cell survival via its ability to phosphorylate Bad at Ser136 (3,4). Bad is phosphorylated at Ser112 both *in vivo* and *in vitro* by p90RSK (5,6) and mitochondria-anchored PKA (7). Phosphorylation of Ser155 in the BH3 domain by PKA plays a critical role in blocking the dimerization of Bad and Bcl-xL (8-10).

**Molecular Weight:** 76 kDa

**Directions for Use:** Boil 3 minutes prior to use. Load 10 µl of phosphorylated and nonphosphorylated Bad Control Proteins per lane.

**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.

**Storage:** Supplied in SDS Sample Buffer: 62.5 mM Tris-HCL (pH 6.8 at 25°C), 2% w/v SDS, 10% glycerol, 50 mM DTT, 0.01% w/v bromophenol blue or phenol red. Store at -20°C, or at -80°C for long-term storage.

**For product specific protocols and a complete listing of recommended companion products, please see the product web page at [www.cellsignal.com](http://www.cellsignal.com).**