

Product Information



CREB (Phospho-Ser¹³³) Polyclonal Antibody

Catalog No. 10009181

Supplied as:	Affinity-purified IgG
Host:	Rabbit
Antigen:	Phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser ¹³³ of rat CREB
Cross Reactivity:	(+) Rat CREB
Stability:	≥1 year at -20°C
Application:	The recommended starting dilution for western blot is 1:1,000. Other applications were not attempted and therefore optimal working dilutions should be determined empirically.

It is well known that the control of gene expression involves activation of protein kinase cascades that regulate transcription factors within the nucleus.¹ The cyclic AMP response element binding protein (CREB) is one of the best characterized stimulus-induced transcription factors.² This transcription factor is a component of intracellular signaling events that regulate a wide range of biological functions, from spermatogenesis to circadian rhythms and memory.^{3,4} A variety of protein kinases including protein kinase A (PKA), mitogen-activated protein kinases (MAPKs), and Ca²⁺/calmodulin-dependent protein kinases (CaMKs) phosphorylate CREB at serine 133 (Ser¹³³), and phosphorylation of Ser¹³³ is required for CREB-mediated transcription.^{5,6}

References

1. Karin, M. and Hunter, T. Transcriptional control by protein phosphorylation: Signal transmission from the cell surface to the nucleus. *Curr. Biol.* **5**, 747-757 (1995).
2. Montminy, M. Transcriptional regulation by cyclic AMP. *Annu. Rev. Biochem.* **66**, 807-822 (1997).
3. Shaywitz, A.J. and Greenberg, M.E. A stimulus-induced transcription factor activated by a diverse array of extracellular signals. *Annu. Rev. Biochem.* **68**, 821-861 (1999).
4. Silva, A.J., Kogan, J.H., Frankland, P.W., *et al.* CREB and memory. *Annu. Rev. Neurosci.* **21**, 127-148 (1998).
5. Johannessen, M., Delghandi, M.P., and Moens, U. What turns CREB on? *Cell. Signal.* **16**, 1211-1227 (2004).
6. Kornhauser, J.M., Cowan, C.W., Shaywitz, A.J., *et al.* CREB transcriptional activity in neurons is regulated by multiple, calcium-specific phosphorylation events. *Neuron* **34**, 221-233 (2002).

Related Products

5-Lipoxygenase (Phospho-Ser⁵²³) Polyclonal Antibody - Cat. No. 10007820 • p38 MAPK (Phospho-Thr¹⁸⁰/Tyr¹⁸²) Polyclonal Antibody - Cat. No. 10009177 • MEK 1/2 (Phospho-Ser^{218,222}) Polyclonal Antibody - Cat. No. 10009178 • ERK/MAPK (Phospho-Thr²⁰²/Tyr²⁰⁴) Polyclonal Antibody - Cat. No. 10009179 • β-Catenin (Phospho-Ser^{33,37}) Polyclonal Antibody - Cat. No. 10009180

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