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Phospho-CREB (Ser133) (1B6) Mouse mAb

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

Entrez-Gene ID #1385
Swiss-Prot Acc. #P16220

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W Endogenous	H, M, R	43 kDa	Mouse IgG1**

Background: CREB is a bZIP transcription factor that activates target genes through cAMP response elements. CREB is able to mediate signals from numerous physiological stimuli, resulting in regulation of a broad array of cellular responses. While CREB is expressed in numerous tissues, it plays a large regulatory role in the nervous system. CREB is believed to play a key role in promoting neuronal survival, precursor proliferation, neurite outgrowth and neuronal differentiation in certain neuronal populations (1-3). Additionally, CREB signaling is involved in learning and memory in several organisms (4-6). CREB is able to selectively activate numerous downstream genes through interactions with different dimerization partners. CREB is activated by phosphorylation at Ser133 by various signaling pathways including Erk, Ca^{2+} and stress signaling. Some of the kinases involved in phosphorylating CREB at Ser133 are p90RSK, MSK, CaMKIV and MAPKAPK-2 (7-9).

Specificity/Sensitivity: Phospho-CREB (Ser133) (1B6) Mouse mAb detects endogenous levels of CREB only when phosphorylated at serine 133. This antibody also detects the phosphorylated form of the CREB-related protein, ATF-1.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser133 of human CREB.

Background References:

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(2) Lee, M.M. et al. (1999) *J. Neurosci. Res.* 55, 702–712.
(3) Redmond, L. et al. (2002) *Neuron* 34, 999–1010.
(4) Dash, P.K. et al. (1990) *Nature* 345, 718–721.
(5) Yin, J.C. et al. (1994) *Cell* 79, 49–58.
(6) Guzowski, J.F. and McGaugh, J.L. (1997) *Proc. Nat. Acad. Sci. USA* 94, 2693–2698.
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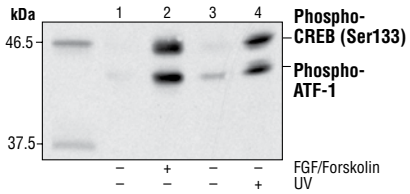
(8) Ribar, T.J. et al. (2000) *J. Neurosci.* 20, RC107.
(9) Tan, Y. et al. (1996) *EMBO J.* 15, 4629–4642.



Western blot analysis of extracts from SK-N-MC cells, untreated or treated with forskolin and FGF (lanes 1 and 2) or 293 cells. untreated or UV treated (lanes 3 and 4), using Phospho-CREB (Ser133) (1B6) Mouse mAb.

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.*

***Species cross-reactivity is determined by western blot.**

****Anti-mouse secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western Blotting	1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 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.