

**#1090** Store at -20°C

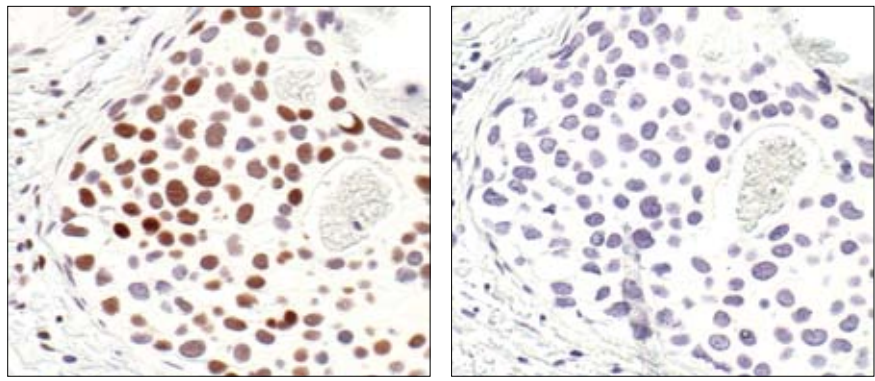
# Phospho-CREB (Ser133) Blocking Peptide

✓ 100 µg

**Orders** ■ 877-616-CELL (2355)  
 orders@cellsignal.com  
**Support** ■ 877-678-TECH (8324)  
 info@cellsignal.com  
**Web** ■ www.cellsignal.com

rev. 08/07/08

**This product is for *in vitro* research use only and is not intended for use in humans or animals. This product is not intended for use as a therapeutic or in diagnostic procedures.**



Immunohistochemical analysis of paraffin-embedded human renal cell carcinoma, untreated (left) or λ phosphatase-treated (right), using Phospho-CREB (Ser133) (87G3) Rabbit mAb.

**Description:** This peptide is used to block Phospho-CREB (Ser133) Antibody #9191, Phospho-CREB (Ser133) (87G3) Rabbit mAb #9198 and Phospho-CREB (Ser133) (1B6) Mouse mAb #9196 reactivity.

**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<sup>2+</sup> and stress signaling. Some of the kinases involved in phosphorylating CREB at Ser133 are p90RSK, MSK, CaMKIV and MAPKAPK-2 (7–9).

**Quality Control:** The quality of the peptide was evaluated by reversed-phase HPLC and by mass spectrometry. The peptide blocks Phospho-CREB (Ser133) Antibody #9191 and Phospho-CREB (Ser133) (1B6) Mouse mAb #9196 by Western Blotting and Phospho-CREB (Ser133) (87G3) Rabbit mAb #9198 by Western Blotting and immunohistochemistry.

**Directions for Use:** For immunohistochemistry, add twice the volume of peptide as volume of antibody used in 100 µl total volume. Incubate for a minimum of 30 minutes prior to adding the entire volume to the slide. Recommended antibody dilutions can be found on the relevant product data sheet. For Western immunoblotting, add 10 µl of antibody and 10 µl of blocking peptide to 10 ml of antibody dilution buffer, and incubate at room temperature for 30 minutes before allowing to react with the blot.

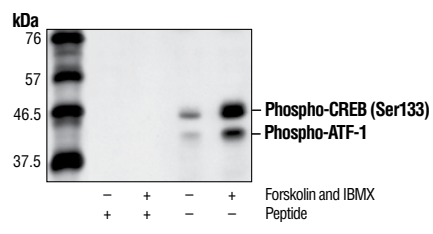
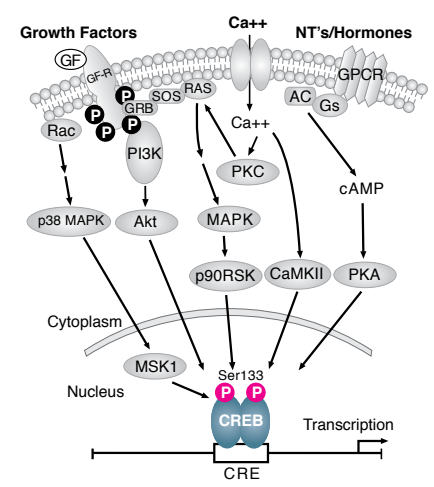
**Selected Application References:**  
 Arnould, T. et al. (2002) CREB activation induced by mitochondrial dysfunction is a new signaling pathway that impairs cell proliferation. CREB activation induced by mitochondrial dysfunction is a new signaling pathway that impairs cell proliferation. *EMBO J.* 21, 53–63. Application: *In vitro* kinase assay.

**Storage:** Supplied in 20 mM potassium phosphate (pH 7.0), 50 mM NaCl, 0.1 mM EDTA, 1 mg/ml BSA and 5% glycerol. Store at -20°C.

- Companion Products:**
- Phospho-CREB (Ser133) Antibody #9191
  - Phospho-CREB (Ser133) (1B6) Mouse mAb #9196
  - Phospho-CREB (Ser133) (87G3) Rabbit mAb #9198
  - Phospho-CREB (Ser133) (87G3) Rabbit mAb (Alexa Fluor® 488 Conjugate) #9187
  - Anti-rabbit IgG, HRP-linked Antibody #7074
  - Prestained Protein Marker, Broad Range (Premixed Format) #7720
  - Biotinylated Protein Ladder Detection Pack #7727
  - 20X LumiGLO® Reagent and 20X Peroxide #7003

**Background References:**

- (1) Lonze, B.E. et al. (2002) *Neuron* 34, 371–385.
- (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 McLaugh, J.L. (1997) *Proc. Nat. Acad. Sci. USA* 94, 2693–2698.
- (7) Xing, J. et al. (1998) *Mol. Cell. Biol.* 18, 1946–1955.
- (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 forskolin and IBMX treated SK-N-MC cells, using Phospho-CREB (Ser133) Antibody #9191 with and without preincubation with phospho-peptide.

**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—zebra fish B—bovine  
 Dg—dog Pg—pig Sc—S. cerevisiae All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.