**Phospho-CREB (Ser133) Antibody**

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

**Applications | Species Cross-Reactivity | Molecular Wt. | Source |**
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W, IP | H, M, R | 43 kDa | Rabbit**

**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, Ca2+ 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) Antibody 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, and has been shown to react weakly with overexpressed levels of pyruvate dehydrogenase.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser133 of human CREB. Antibodies are purified by protein A and peptide affinity chromatography.

**Background References:**

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at −20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot. Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**
- Western blotting: 1:1000
- Immunoprecipitation: 1:50

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.