

Store at
-20°C

PhosphoPlus® CREB (Ser133) Antibody Duet

#8212



Cell Signaling
TECHNOLOGY®

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Entrez-Gene ID #1385
UniProt ID #P16220

New 06/18

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

Products Included	Product #	Quantity	Mol. Wt.	Isotype/Source
Phospho-CREB (Ser133)(87G3) Rabbit mAb	9198	100 µl	43 kDa	Rabbit IgG
CREB (48H2) Rabbit mAb	9197	100 µl	43 kDa	Rabbit IgG

See www.cellsignal.com for individual component applications, species cross-reactivity, dilutions, and additional application protocols.

Description: PhosphoPlus® Duets from Cell Signaling Technology (CST) provide a means to assess protein activation status. Each Duet contains an activation-state and total protein antibody to your target of interest. These antibodies have been selected from CST's product offering based upon superior performance in specified applications.

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: CREB (48H2) Rabbit mAb detects endogenous levels of total CREB-1 protein. The antibody does not cross-react with other ATF/CREB family members. Phospho-CREB (Ser133) (87G3) Rabbit mAb detects endogenous levels of CREB only when phosphorylated at serine 133. The antibody also detects the phosphorylated form of the CREB-related protein, ATF-1.

Source/Purification: Monoclonal antibodies are produced by immunizing animals with recombinant protein specific to the amino terminus of human CREB-1 protein and a synthetic phosphopeptide corresponding to residues surrounding Ser133 of human CREB.

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.*

Background References:

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- (3) Redmond, L. et al. (2002) *Neuron* 34, 999-1010.
- (4) Dash, P.K. et al. (1990) *Nature* 345, 718-21.
- (5) Yin, J.C. et al. (1994) *Cell* 79, 49-58.
- (6) Guzowski, J.F. and McLaugh, J.L. (1997) *Proc Natl Acad Sci USA* 94, 2693-8.
- (7) Xing, J. et al. (1998) *Mol Cell Biol* 18, 1946-55.
- (8) Ribar, T.J. et al. (2000) *J Neurosci* 20, RC107.
- (9) Tan, Y. et al. (1996) *EMBO J* 15, 4629-42.

U.S. Patent No. 7,429,487, foreign equivalents, and child patents deriving therefrom.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** 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.