#4820 Store at -20°C

CREB (D76D11) Rabbit mAb

☑ 100 µl
(10 western blots)

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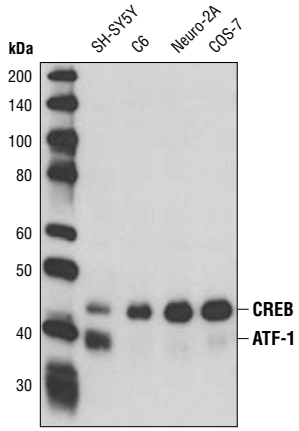
Entrez-Gene ID #1385
Swiss-Prot Acc. #P16220

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IF-IC, IF-F, F, ChIP Endogenous	H, M, R, Mk, Dm, Hm	43 kDa	Rabbit IgG**

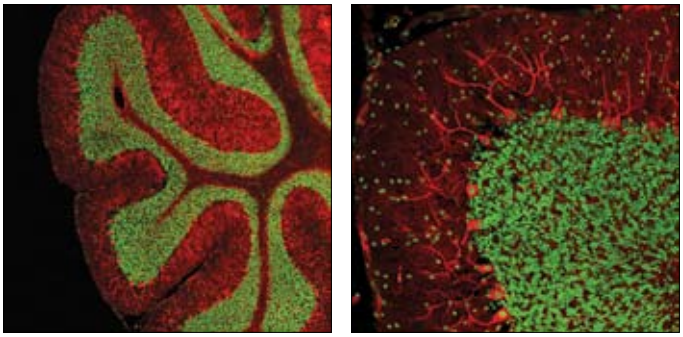
Background: CREB is a bZIP transcription factor that activates target genes through cAMP response elements. CREB is able to mediate signals from numerous physiological stimuli, resulting in regulation of a broad array of cellular responses. While CREB is expressed in numerous tissues, it plays a large 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: CREB (D76D11) Rabbit mAb detects endogenous levels of total CREB protein. It cross reacts with ATF-1

Source/Purification: Monoclonal antibody is produced by immunizing animals with a full length GST-CREB fusion protein.



Western blot analysis of extracts from various cell lines using CREB (D76D11) Rabbit mAb.



Confocal immunofluorescent analysis of mouse brain using CREB (D76D11) Rabbit mAb (green) and β3-Tubulin (TU-20) Mouse mAb #4466 (red).

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

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

Recommended Antibody Dilutions:

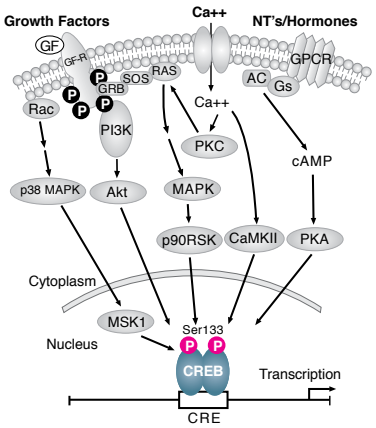
Western blotting	1:1000
Immunoprecipitation	1:50
Immunofluorescence (IF-IC)	1:600
Immunofluorescence (IF-F)	1:600
Flow Cytometry	1:200
Chromatin IP	1:50

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

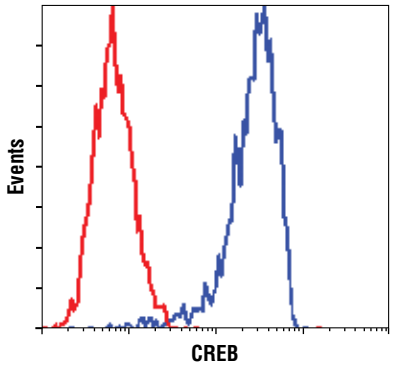
Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background References:

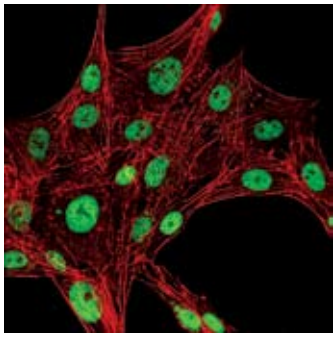
(1) Lonze, B.E. et al. (2002) *Neuron* 34, 371–385.
(2) Lee, M.M. et al. (1999) *J. Neurosci. Res.* 55, 702–712.
(3) Redmond, L. et al. (2002) *Neuron* 34, 999–1010.
(4) Dash, P.K. et al. (1990) *Nature* 345, 718–721.
(5) Yin, J.C. et al. (1994) *Cell* 79, 49–58.
(6) Guzowski, J.F. and McGaugh, J.L. (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.



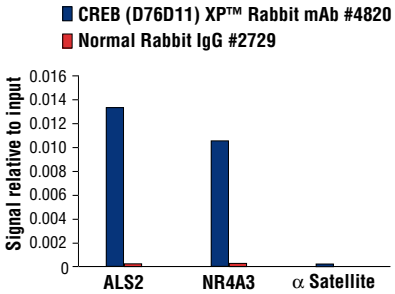
Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **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.



Flow cytometric analysis of SH-SY5Y cells, using CREB (D76D11) Rabbit mAb Antibody (blue) compared to concentration matched Rabbit (DA1E) mAb IgG Isotype Control #3900 (red).



Confocal immunofluorescent analysis of SH-SY5Y cells using CREB (D76D11) Rabbit mAb (green). Actin filaments have been labeled with DY-554 phalloidin (red).



Chromatin immunoprecipitations were performed with cross-linked chromatin from 4 x 10^6 293 cells treated with Forskolin #3828 (30 µM) and either 10 µl of CREB (D76D11) XP™ Rabbit mAb or 2 µl of Normal Rabbit IgG #2729 using SimpleChIP™ Enzymatic Chromatin IP Kit (Magnetic Beads) #9003. The enriched DNA was quantified by Real-Time PCR using human ALS2 exon 1 primers, SimpleChIP™ Human NR4A3 Promoter Primers #4829, and SimpleChIP™ Human α Satellite Repeat Primers #4486. The amount of immunoprecipitated DNA in each sample is represented as signal relative to the total amount of input chromatin, which is equivalent to one.