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Phospho-CREB (Ser133) (87G3) Rabbit mAb (PE Conjugate)



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Source/Isotype: Entrez-Gene Id: Applications: Reactivity: Sensitivity: **UniProt ID:** FC-FP $\mathsf{H}\,\mathsf{M}\,\mathsf{R}$ Endogenous Rabbit IgG #P16220 1385 **Product Usage** Application Dilution Information Flow Cytometry (Fixed/Permeabilized) 1:50 Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the **Storage** antibodies. Protect from light. Do not freeze. Specificity / Sensitivity Phospho-CREB (Ser133) (87G3) Rabbit mAb (PE Conjugate) detects endogenous levels of CREB only when phosphorylated at Ser133. The antibody also detects the phosphorylated form of the CREB-related protein, ATF-1.

Species predicted to react based on 100% sequence homology:

Zebrafish

Source / Purification

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

Product Description

This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in human cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated Phospho-CREB (Ser133) (87G3) Rabbit mAb #9198.

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).

Background References

- 1. Lonze, B.E. et al. (2002) Neuron 34, 371-85.
- 2. Lee, M.M. et al. (1999) J Neurosci Res 55, 702-12.
- 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 McGaugh, 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.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

Cross-Reactivity Key

FC-FP: Flow Cytometry (Fixed/Permeabilized)

Phospho-CREB (Ser133) (87G3) Rabbit mAb (PE Conjugate) (#14228) Datasheet Without Images Cell Sig...

H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus 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 GP: Guinea Pig Rab: rabbit All: all species expected

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