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Phospho-CREB (Ser133) (87G3) Rabbit mAb (Alexa Fluor® 488 Conjugate)


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Applications: FC-FP	Reactivity: H M R	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #P16220	Entrez-Gene Id: 1385
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Product Usage Information	Application Flow Cytometry (Fixed/Permeabilized)	Dilution 1:50
Storage	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 antibody. Protect from light. Do not freeze.	
Specificity / Sensitivity	Phospho-CREB (Ser133) (87G3) (Alexa Fluor® 488 Conjugate) 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.	
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. The antibody was conjugated to Alexa Fluor® 488 under optimal conditions with an F/P ratio of 2-6.	
Product Description	This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 488 fluorescent dye and tested in-house for direct flow cytometry and immunofluorescent analysis in human and mouse 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, Ca ²⁺ , 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) <i>Neuron</i> 34, 371-85. 2. Lee, M.M. et al. (1999) <i>J Neurosci Res</i> 55, 702-12. 3. Redmond, L. et al. (2002) <i>Neuron</i> 34, 999-1010. 4. Dash, P.K. et al. (1990) <i>Nature</i> 345, 718-21. 5. Yin, J.C. et al. (1994) <i>Cell</i> 79, 49-58. 6. Guzowski, J.F. and McGaugh, J.L. (1997) <i>Proc Natl Acad Sci USA</i> 94, 2693-8. 7. Xing, J. et al. (1998) <i>Mol Cell Biol</i> 18, 1946-55. 8. Ribar, T.J. et al. (2000) <i>J Neurosci</i> 20, RC107. 9. Tan, Y. et al. (1996) <i>EMBO J</i> 15, 4629-42.	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Applications Key	FC-FP: Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

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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