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

For Research Use Only. Not for Use in Diagnostic Procedures.

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.

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.

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, 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.
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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

FC-FP: Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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