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Product Information

Anti-phospho-CREB (pSer^{133})
produced in rabbit, affinity isolated antibody

Catalog Number **C9102**

Product Description

Anti-phospho-CREB (pSer^{133}) is produced in rabbit using a synthetic peptide corresponding to residues around phospho-Ser 133 of human CREB, conjugated to KLH, as immunogen. The antibody is affinity-purified using the protein A and peptide affinity chromatography.

Anti-phospho-CREB (pSer^{133}) detects CREB levels, when phosphorylated at Ser133. It also detects phosphorylated ATF-1. The antibody reacts with human, rat, and mouse CREB. It may be used for immunoblotting (43 kDa) and immunoprecipitation. The transcription factor CREB binds the cyclic AMP response element (CRE) and activates transcription in response to a variety of extracellular signals including cAMP, membrane depolarization, increased intra-cellular Ca^{2+}, and growth and neurotrophic factors.[1-3] Phosphorylation of CREB at Ser^{133} regulates the ability of CREB to activate transcription when bound at a CRE. Mutation of Ser^{133} renders CREB non-responsive to multiple signaling pathways. A variety of protein kinases have been shown to phosphorylate CREB at Ser^{133} *in vitro*, including PKA, PKC, CAM kinase II and IV, and p90^{rsk}. Phosphorylation at Ser^{133} has also been shown to promote interaction with a CREB binding protein, CBP, required for transcriptional activation by CREB, AP-1, and SRF dependent promoters.[3, 4] CREB appears to play an important role in learning and memory in both flies and mice. Mice lacking CREB exhibit deficiencies in spatial learning tasks, while flies overexpressing and lacking CREB show enhanced or diminished learning.[5, 6]

Reagent

Supplied as an affinity-isolated antibody in 10 mM sodium HEPES, pH 7.5, containing 150 mM sodium chloride, 100 μg/ml bovine serum albumin, and 50% glycerol.

Storage/Stability

Store at –20 °C. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting (chemiluminescent): the recommended working antibody dilution is 1:1,000 using an extract from SK-N-MC cells, untreated or forskolin treated.

Immunoprecipitation: the recommended working antibody dilution is 1:50.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working dilution by titration.

References

1. Gonzalez, G.A., and Montminy, M.R., *Cell*, **59**, 675-680 (1989).
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3. Kwok, R.P.S., et al., *Nature*, **370**, 223-226 (1994).
4. Arias, J., et al., *Nature*, **370**, 226-229 (1994).
5. Frank, D.A., and Greenberg, M.E., Cell, **79**, 5-8 (1994).
6. Yin, J.C.P., et al., *Cell*, **81**, 107-115 (1995).

SC,PHC 05/13-1