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Product Information

Monoclonal Anti-CREB, clone 48H2
produced in rabbit, purified immunoglobulin

Product Number **C8977**

Product Description

Monoclonal Anti-CREB (rabbit IgG isotype) is derived from the 48H2 hybridoma produced by immunizing rabbits with recombinant protein specific to amino terminus of human CREB. The antibody is purified using Protein G chromatography.

Monoclonal Anti-CREB detects endogenous levels of total CREB protein. The antibody reacts with human, mouse, rat and monkey CREB. It may be used for immunoblotting, immunoprecipitation, immuno-cytochemistry, immunofluorescence, immunohistochemistry, flow cytometry and chromatin immunoprecipitation.

CREB is a bZIP transcription factor that binds the cyclic AMP response element (CRE) and activates transcription in response to a variety of extracellular signals including cAMP, membrane depolarization, increased intracellular 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 or lacking CREB show enhanced or diminished learning.[5,6]

Reagent

Supplied as a solution in 10 mM HEPES sodium, pH 7.5, containing 150 mM sodium chloride, 100 μg/mL bovine serum albumin, 50% glycerol and <0.02% sodium azide.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at −20 °C. Do not aliquot the antibody. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: recommended working dilution is 1:1,000 using an extract from SK-N-MC, NIH-3T3, and COS cells.

Immunoprecipitation: recommended working dilution is 1:250.

Immunocytochemistry (indirect immunofluorescence): recommended working dilution is 1:800.

Immunohistochemistry: recommended working dilution is 1:6,400 using paraffin-embedded sections or frozen sections.

Flow cytometry: recommended working dilution is 1:400 using SK-N-MC cells.

Chromatin immunoprecipitation: recommended working dilution is 1:50.

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

References

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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).

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