

PRODUCT DATA SHEET

Product Name: ANTI-PHOSPHO-Ser¹³³ CREB ANTIBODY

Product Code: P40002-100

Pack Size: 100 µL

Description: It is well known that the control of gene expression involves activation of protein kinase cascades that regulate transcription factors within the nucleus (Karin and Hunter, 1995). The cyclic AMP response element binding protein (CREB) is one of the best characterized stimulus-induced transcription factors (Montminy, 1997). This transcription factor is a component of intracellular signaling events that regulate a wide range of biological functions, from spermatogenesis to circadian rhythms and memory (Shaywitz and Greenberg, 1999; Silva et al., 1998). A variety of protein kinases including protein kinase A (PKA), mitogen-activated protein kinases (MAPKs), and Ca²⁺/calmodulin-dependent protein kinases (CaMKs) phosphorylate CREB at serine 133 (Ser¹³³), and phosphorylation of Ser¹³³ is required for CREB-mediated transcription (Johannessen et al., 2004; Kornhauser et al., 2002).

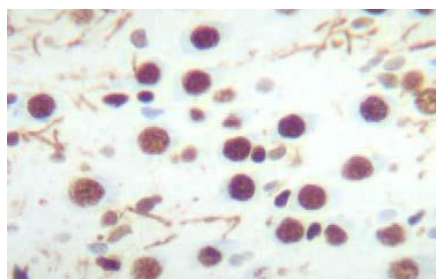
Physical State: Liquid; Buffer contents: 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per mL BSA and 50% glycerol

Storage/Stability: Stable at -20 °C for at least 1 year. For long term storage -20 °C is recommended

Purification Method: Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

Shipping Conditions: Domestic: Blue Ice
International: Blue Ice or Dry Ice

Immunostaining
Cultured rat hippocampal slices showing nuclear labeling of CREB phosphorylated at Ser¹³³ in brown.



Host Species: Rabbit (Polyclonal)

Mr (kDa): 45

Immunogen: Phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser¹³³ of rat CREB.

Species Reactivity: The antibody has been directly tested for reactivity in Western blots with rat tissue. It is anticipated that the antibody will also react with bovine, canine, chicken, human, mouse, non-human primate, rat, sheep, Xenopus and zebra fish based on the fact that these species have 100% homology with the amino acid sequence used as antigen.

Recommended Antibody Dilutions:

WB: 1:1000

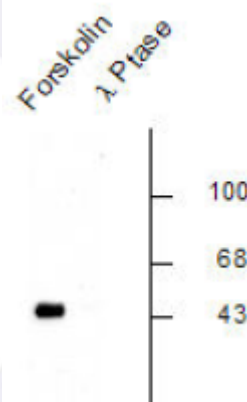
IHC: 1:100

References:

- 1) Johannessen M et al. (2004) *Cellular Signalling* 16:1211-1227.
- 2) Karin M et al. (1995) *Curr Biol* 5:747-757.
- 3) Kornhauser JM et al. (2002) *Neuron* 34:221-233.
- 4) Montminy M (1997) *Annu Rev Biochem* 66:807-822.
- 5) Shaywitz AJ (1999) *Annu Rev Biochem* 68:821-861.
- 6) Silva AJ et al. (1998) *Annu Rev Neurosci* 21:127-148.

Western Blot

Forskolin stimulated rat hippocampal lysate showing specific immunolabeling of the ~45k CREB phosphorylated at Ser¹³³. Immunolabeling is completely eliminated by treatment with λ-Phosphatase in lane 2.



Application Key: WB – Western Blot IF – Immunofluorescence IHC – Immunohistochemistry IP - Immunoprecipitation

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P/N: 74084 Rev 01