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#3955

## CREB (48H2) Rabbit mAb (Sepharose<sup>®</sup> Bead Conjugate)

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

|                            |                                   |                                   |                        |                                      |                               |                                |
|----------------------------|-----------------------------------|-----------------------------------|------------------------|--------------------------------------|-------------------------------|--------------------------------|
| <b>Applications:</b><br>IP | <b>Reactivity:</b><br>H M R Mk Dm | <b>Sensitivity:</b><br>Endogenous | <b>MW (kDa):</b><br>43 | <b>Source/Isotype:</b><br>Rabbit IgG | <b>UniProt ID:</b><br>#P16220 | <b>Entrez-Gene Id:</b><br>1385 |
|----------------------------|-----------------------------------|-----------------------------------|------------------------|--------------------------------------|-------------------------------|--------------------------------|

### Product Usage Information

#### Application

Immunoprecipitation

#### Dilution

1:20

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol. Store at -20°C. Do not aliquot the antibodies.

### Specificity/Sensitivity

CREB (48H2) Rabbit mAb (Sepharose<sup>®</sup> Bead Conjugate) detects endogenous levels of total CREB protein.

### Source / Purification Description

Monoclonal antibody is produced by immunizing animals with a GST-CREB full length fusion protein.

This Cell Signaling Technology (CST) antibody is immobilized via covalent binding of primary amino groups to N-hydroxysuccinimide (NHS)-activated Sepharose<sup>®</sup> beads. It is useful for the immunoprecipitation of CREB. CST expects that CREB (48H2) Rabbit mAb (Sepharose<sup>®</sup> Bead Conjugate) will display the same species cross-reactivity as the unconjugated antibody (CREB (48H2) Rabbit mAb #9197).

### 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<sup>2+</sup>, 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.
3. Redmond, L. et al. (2002) *Neuron* 34, 999-1010.
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

**IP:** Immunoprecipitation

### Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey **Dm:** D. melanogaster

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