

# CREB1 Recombinant monoclonal antibody, PBS Only

Catalog Number: 88035-1-PBS

## Basic Information

|                                            |                                                                |                                                       |
|--------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------|
| <b>Catalog Number:</b><br>88035-1-PBS      | <b>GenBank Accession Number:</b><br>BC010636                   | <b>Purification Method:</b><br>Protein A purification |
| <b>Source:</b><br>Rabbit                   | <b>GeneID (NCBI):</b><br>1385                                  | <b>CloneNo.:</b><br>260329B5                          |
| <b>Isotype:</b><br>IgG                     | <b>UNIPROT ID:</b><br>P16220                                   |                                                       |
| <b>Immunogen Catalog Number:</b><br>AG2852 | <b>Full Name:</b><br>cAMP responsive element binding protein 1 |                                                       |
|                                            | <b>Calculated MW:</b><br>341 aa, 35 kDa                        |                                                       |
|                                            | <b>Observed MW:</b><br>40-45 kDa                               |                                                       |

## Applications

**Tested Applications:**  
WB, IHC, IF/ICC, FC (Intra), Indirect ELISA, ChIP-qPCR

**Species Specificity:**  
human, mouse

## Background Information

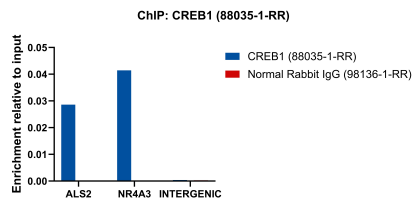
CREB1, also named as CREB, belongs to the bZIP family, containing one bZIP domain and one KID (kinase-inducible) domain. This protein binds the cAMP response element (CRE), a sequence present in many viral and cellular promoters. CREB stimulates transcription on binding to the CRE. This protein is stimulated by phosphorylation. Phosphorylation of both Ser-133 and Ser-142 in the SCN regulates the activity of CREB and participates in circadian rhythm generation. Phosphorylation of Ser-133 allows CREBBP binding. Transcription activation is enhanced by the TORC coactivators which act independently of Ser-133 phosphorylation. CREB1 is sumoylated by SUMO1. Sumoylation on Lys-304, but not on Lys-285, is required for nuclear localization of this protein. Sumoylation is enhanced under hypoxia, promoting nuclear localization and stabilization. Defects in CREB1 may be a cause of angiomatoid fibrous histiocytoma (AFH), a distinct variant of malignant fibrous histiocytoma that typically occurs in children and adolescents and is manifest by nodular subcutaneous growth. A chromosomal aberration involving CREB1 is found in a patient with angiomatoid fibrous histiocytoma. Translocation t(2;22)(q33;q12) with CREB1 generates a EWSR1/CREB1 fusion gene that is most common genetic abnormality in this tumor type. CREB1 exists some isoforms and range of calculated molecular weight of isoforms are 35-37 kDa and 25 kDa, but the modified CREB1 protein is about 43 kDa (PMID: 25883219).

## Storage

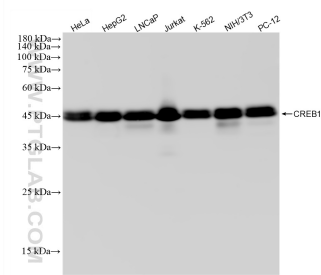
**Storage:**  
Store at -80°C.  
**The product is shipped with ice packs. Upon receipt, store it immediately at -80°C**

**Storage Buffer:**  
PBS only, pH7.3

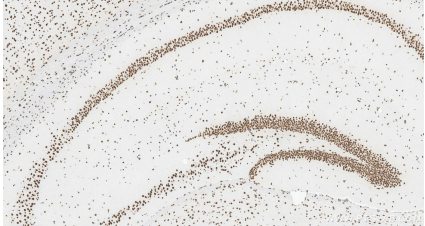
Selected Validation Data



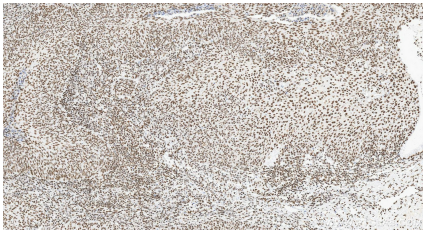
Chromatin was prepared from HEK-293 cells treated with Forskolin (30  $\mu$  M, 1 h). Cells were fixed with formaldehyde for 10 minutes. The ChIP was performed with 15  $\mu$ g of cross-linked chromatin, 5  $\mu$ g of CREB1 (88035-1-RR) or 5  $\mu$ g of Normal Rabbit IgG (98136-1-RR), and 20  $\mu$ l of Protein A Magarose Beads. The immunoprecipitated DNA was quantified by real-time PCR. This data was developed using the same antibody clone with 88035-1-PBS in a



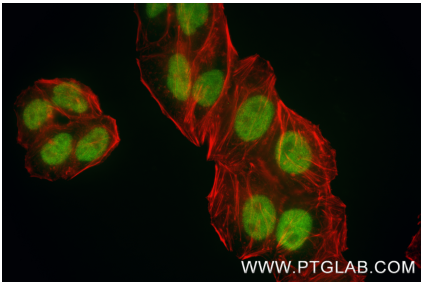
Various lysates were subjected to SDS PAGE followed by western blot with 88035-1-RR (CREB1 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours. This data was developed using the same antibody clone with 88035-1-PBS in a different storage buffer formulation.



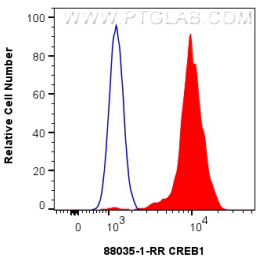
Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 88035-1-RR (CREB1 antibody) at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0). This data was developed using the same antibody clone with 88035-1-PBS in a different storage buffer formulation.



Immunohistochemical analysis of paraffin-embedded human cervical cancer tissue slide using 88035-1-RR (CREB1 antibody) at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0). This data was developed using the same antibody clone with 88035-1-PBS in a different storage buffer formulation.



Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using CREB1 antibody (88035-1-RR, Clone: 260329B5) at dilution of 1:500 and Coralite@488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2). This data was developed using the same antibody clone with 88035-1-PBS in a different storage buffer formulation.



1x10<sup>6</sup> HEK-293 cells were intracellularly stained with 0.25  $\mu$ g CREB1 Recombinant monoclonal antibody (88035-1-RR, Clone:260329B5) and Coralite@488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2)(red), or 0.25  $\mu$ g Isotype Control (blue). Cells were fixed and permeabilized with Transcription Factor Staining Buffer Kit (PF00011). This data was developed using the same antibody clone with 88035-1-PBS in a different storage buffer formulation.