

## CREB1 Polyclonal antibody

Catalog Number: 12208-1-AP

Featured Product

107 Publications

## Basic Information

## Catalog Number:

12208-1-AP

## Size:

700 µg/ml

## Source:

Rabbit

## Isotype:

IgG

## Immunogen Catalog Number:

AG2852

## GenBank Accession Number:

BC010636

## GeneID (NCBI):

1385

## UNIPROT ID:

P16220

## Full Name:

cAMP responsive element binding protein 1

## Calculated MW:

341 aa, 35 kDa

## Observed MW:

43-46 kDa

## Purification Method:

Antigen affinity purification

## Recommended Dilutions:

WB 1:2000-1:12000

IP 0.5-4.0 µg for 1.0-3.0 mg of total protein lysate

IHC 1:500-1:2000

IF 1:50-1:500

## Applications

## Tested Applications:

FC, IF/ICC, IHC, IP, WB, ELISA

## Cited Applications:

WB, IP, IF, RIP, IHC, CoIP, ChIP, ELISA

## Species Specificity:

human, mouse, rat, monkey

## Cited Species:

human, chicken, rat, sea cucumbers, mouse

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

## Positive Controls:

**WB**: HEK-293 cells, rat brain tissue, Jurkat cells, COS-7 cells, mouse brain tissue, mouse lung tissue, HeLa cells, HepG2 cells, NIH/3T3 cells, PC-12 cells, PC-3 cells, HL-60 cells, A431 cells, MCF-7 cells, K-562 cells

**IP**: HEK-293 cells,

**IHC**: mouse brain tissue, human cervical cancer tissue, human prostate cancer tissue, human thyroid tissue

**IF**: HeLa cells, HEK-293 cells

## 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).

## Notable Publications

Author	Pubmed ID	Journal	Application
Yu Wang	34658758	Front Neurosci	WB
YanHua Fan	36174847	Fitoterapia	WB
Chenxia Sheng	29057264	Biomed Res Int	WB

## Storage

## Storage:

Store at -20°C. Stable for one year after shipment.

## Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

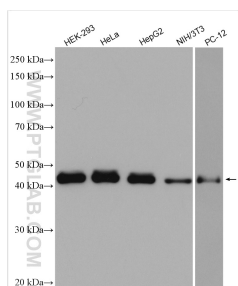
For technical support and original validation data for this product please contact:

T: 4006900926

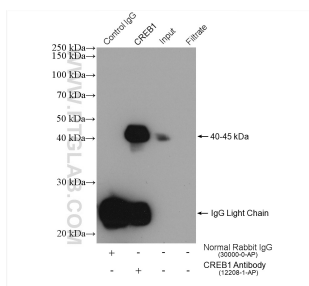
E: [Proteintech-CN@ptglab.com](mailto:Proteintech-CN@ptglab.com)W: [ptgcn.com](http://ptgcn.com)

**This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.**

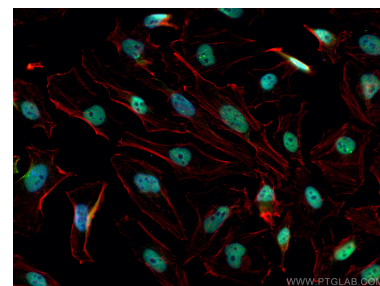
## Selected Validation Data



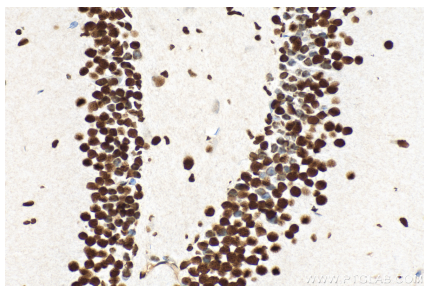
Various lysates were subjected to SDS PAGE followed by western blot with 12208-1-AP (CREB1 antibody) at dilution of 1:6000 incubated at room temperature for 1.5 hours.



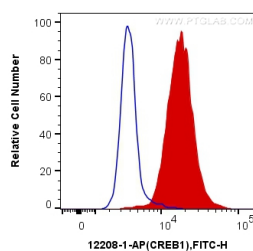
IP result of anti-CREB1 (IP:12208-1-AP, 4ug; Detection:12208-1-AP 1:2000) with HEK-293 cells lysate 1360 ug.



Immunofluorescent analysis of (4% PFA) fixed HeLa cells using CREB1 antibody (12208-1-AP) at dilution of 1:200 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L), CL594-Phalloidin (red).



Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 12208-1-AP (CREB1 antibody) at dilution of 1:1000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



1X10<sup>6</sup> HEK-293 cells were intracellularly stained with 0.25 ug Anti-Human CREB1 (12208-1-AP) and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) at dilution 1:1000 (red), or 0.25 ug Control Antibody. Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).