

CREB1 Polyclonal antibody

Catalog Number: 12208-1-AP

Featured Product

149 Publications

Basic Information

Catalog Number:

12208-1-AP

Concentration:

700 ug/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 ug for 1.0-3.0 mg of total protein lysate

IHC 1:500-1:2000

IF/ICC 1:400-1:1600

Applications

Tested Applications:

WB, IHC, IF/ICC, FC (Intra), IP, ChIP, ELISA

Cited Applications:

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

Species Specificity:

human, mouse, rat, monkey

Cited Species:

human, mouse, rat, chicken, goat, sea cucumbers

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, multi-cells/tissue, Jurkat cells, COS-7 cells, mouse brain tissue, mouse lung tissue, HeLa cells, PC-3 cells, HL-60 cells, A431 cells, MCF-7 cells, K-562 cells, NIH/3T3 cells, HepG2 cells, PC-12 cells

IP: HEK-293 cells,

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

IF/ICC: 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

Aliquoting is unnecessary for -20°C storage

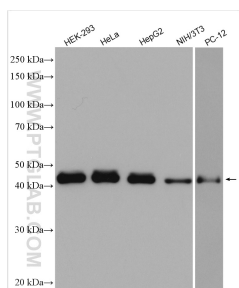
For technical support and original validation data for this product please contact:

T: 4006900926

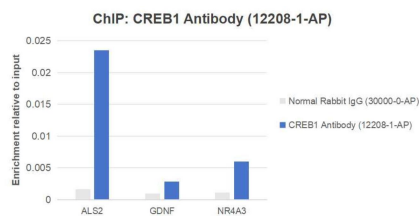
E: Proteintech-CN@ptglab.comW: ptgcn.com

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

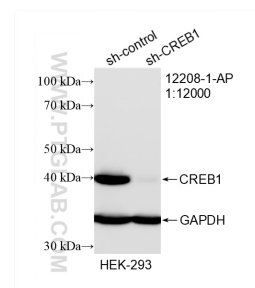
Selected Validation Data



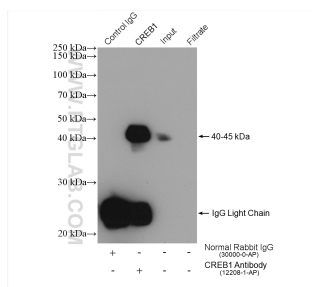
Various lysates were subjected to SDS PAGE followed by western blot with 12208-1-AP (CREB1 antibody) at dilution of 1:6000 incubated at room temperature for 1.5 hours.



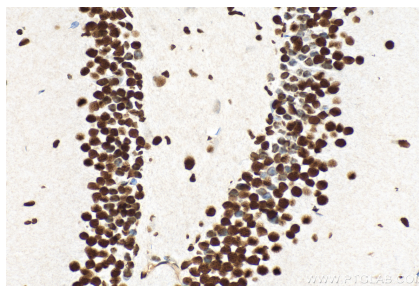
Chromatin was prepared from HEK-293 cells, cells were fixed with formaldehyde for 10 minutes. The ChIP was performed with 25 µg of cross-linked chromatin, 5 µg of CREB1 Antibody (12208-1-AP) or 5 µg of Normal Rabbit IgG (30000-0-AP), and 30 µl of Protein A Magarose Beads. The immunoprecipitated DNA was quantified by real time PCR. Primers are located in the first kb of the transcribed region.



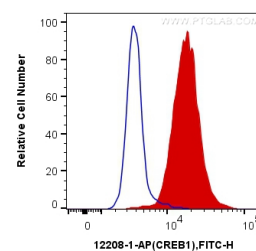
WB result of CREB1 antibody (12208-1-AP; 1:12000; incubated at room temperature for 1.5 hours) with sh-Control and sh-CREB1 transfected HEK-293 cells.



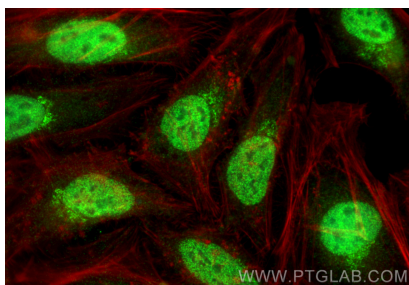
IP result of anti-CREB1 (IP:12208-1-AP, 4µg; Detection:12208-1-AP 1:2000) with HEK-293 cells lysate 1360 µg.



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).



1X10⁶ HEK-293 cells were intracellularly stained with 0.25 µg 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 µg Control Antibody. Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).



Immunofluorescent analysis of (4% PFA) fixed HeLa cells using CREB1 antibody (12208-1-AP) at dilution of 1:800 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2), CL594-Phalloidin (red).