For Research Use Only

CREB1 Polyclonal antibody

Catalog Number:12208-1-AP Featured Product 149 Publications

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Basic Information

Catalog Number:
12208-1-AP

Size:
150ul , Concentration: 700 ug/ml by Nanodrop;

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

*** 20ul sizes contain 0.1% BSA

For technical support and original validation data for this product please contact:
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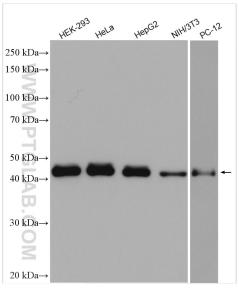
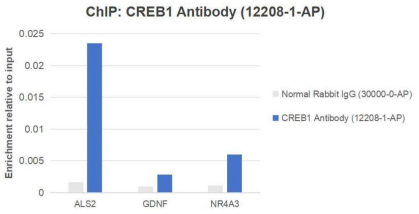
E: proteintech@ptglab.com
W: ptglab.com

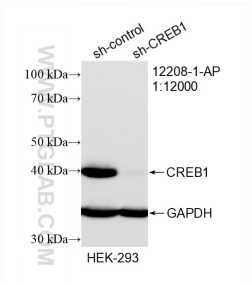
Selected Validation Data



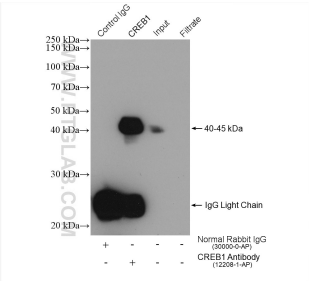
Various lysates were subjected to SDS PAGE followed by western blot with 12208-1-AP (CREB1 antibody) at dilution of 1:6000 incubated at room temperature for 1.5 hours.



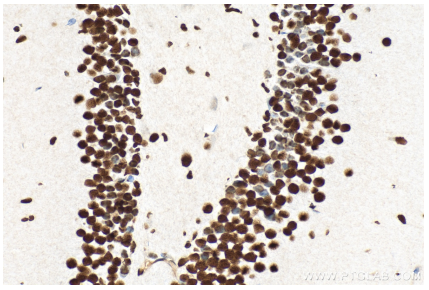
Chromatin was prepared from HEK-293 cells, cells were fixed with formaldehyde for 10 minutes. The ChIP was performed with 25 µg of cross-linked chromatin, 5 µg of CREB1 Antibody (12208-1-AP) or 5 ug of Normal Rabbit IgG (30000-0-AP), and 30 µl of Protein A Magarose Beads. The immunoprecipitated DNA was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



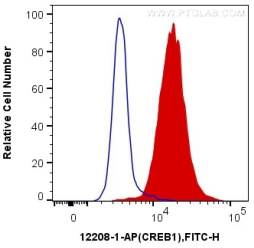
WB result of CREB1 antibody (12208-1-AP; 1:12000; incubated at room temperature for 1.5 hours) with sh-Control and sh-CREB1 transfected HEK-293 cells.



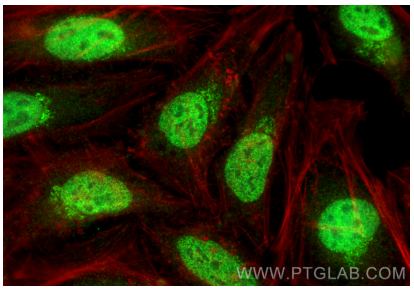
IP result of anti-CREB1 (IP:12208-1-AP, 4ug; Detection:12208-1-AP 1:2000) with HEK-293 cells lysate 1360 ug.



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).



1X10^6 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).



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).