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# CREB1 Polyclonal ANTIBODY

Catalog Number:12208-1-AP

12 Publications

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## Basic Information

Catalog Number:
12208-1-AP

Size:
43 µg/150 µl

Source:
Rabbit

Isotype:
IgG

Purification Method:
Antigen affinity purification

Immunogen Catalog Number:
AG2852

GenBank Accession Number:
BC010636

GeneID (NCBI):
1385

Full Name:
cAMP responsive element binding protein 1

Calculated MW:
341aa,35 kDa

Observed MW:
43-46 kDa

Recommended Dilutions:
WB 1:500-1:3000
IP 0.5-4.0 ug for IP and 1:500-1:1000 for WB
IHC 1:50-1:500
IF 1:10-1:100

## Applications

Tested Applications:
FC, IF, IHC, IP, WB, ELISA

Cited Applications:
IHC, WB

Species Specificity:
human, mouse, rat, monkey

Cited Species:
human, mouse, rat

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

Positive Controls:

WB : multi-cells/tissue; COS-7 cells, HEK-293 cells, HeLa cells, Jurkat cells, K-562 cells, mouse brain tissue, mouse lung tissue, NIH/3T3 cells, rat brain tissue

IP : HEK-293 cells;

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

IF : 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

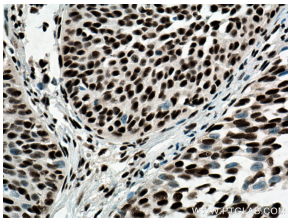
| Author | Pubmed ID | Journal | Application |
|---|---|---|---|
| Chenxia Sheng | 29057264 | Biomed Res Int | WB |
| Xiqiong Han | 30459620 | Front Pharmacol | WB |
| Wendan Xu | 29743498 | Sci Rep | WB |

## Storage

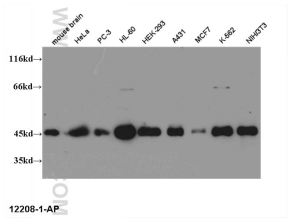
Storage:
Store at -20ºC. Stable for one year after shipment.
Storage Buffer:
PBS with 0.1% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20˚C storage

For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

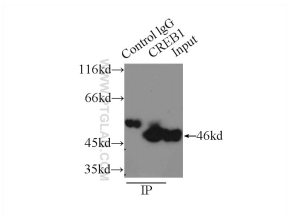
## Selected Validation Data



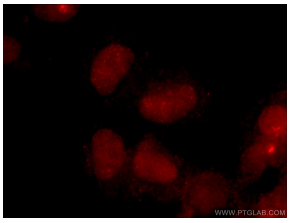
Immunohistochemistry of paraffin-embedded human cervical cancer tissue slide using 12208-1-AP (CREB1 antibody) at dilution of 1:200 (under 40x lens) heat mediated antigen retrieved with Tris-EDTA buffer(pH9).



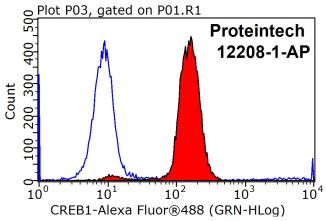

WB result of 12208-1-AP (CREB1 antibody) with various lysates at dilution of 1:1,500.




IP Result of anti-CREB1 (IP:12208-1-AP, 3ug; Detection:12208-1-AP 1:600) with HEK-293 cells lysate 2000ug.



Immunofluorescent analysis of HEK-293 cells using 12208-1-AP(CREB1 antibody) at dilution of 1:25 and Rhodamine-Goat anti-Rabbit IgG




1X10^6 HEK-293 cells were stained with 0.2ug CREB1 antibody (12208-1-AP, red) and control antibody (blue). Fixed with 90% MeOH blocked with 3% BSA (30 min). Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) with dilution 1:1000.