For Research Use Only

CREB1 Monoclonal antibody

Catalog Number:67927-1-Ig Featured Product 7 Publications

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Basic Information

Catalog Number:
67927-1-Ig

Size:
150ul , Concentration: 1000 ug/ml by Nanodrop;

Source:
Mouse

Isotype:
IgG1

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:
Protein G purification

CloneNo.:
1E11C1

Recommended Dilutions:
WB: 1:5000-1:50000
IHC: 1:1000-1:4000
IF/ICC: 1:4000-1:16000
FC (Intra): 0.20 ug per 10^6 cells in a 100 µl suspension

Applications

Tested Applications:
WB, IHC, IF/ICC, ELISA

Cited Applications:
WB, IF, IP

Species Specificity:
human, mouse, rat

Cited Species:
human, mouse, rat, rabbit

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 : LNCaP cells, HEK-293 cells, HeLa cells, HepG2 cells, Jurkat cells, K-562 cells, HSC-T6 cells, NIH/3T3 cells

IHC : human prostate cancer tissue, human cervical cancer tissue

IF/ICC : A431 cells,

FC (Intra) : Jurkat 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
Di Cui	36175877	BMC Cancer	WB
Yan Sun	34469122	ACS Chem Neurosci	WB
Xiaoyan Hao	39806097	EMBO J	

Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol, pH7.3
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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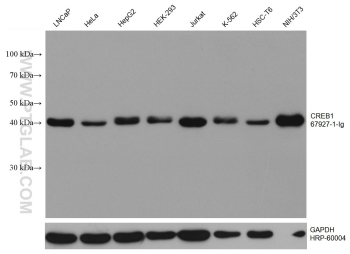
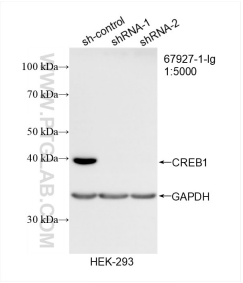
E: proteintech@ptglab.com
W: ptglab.com

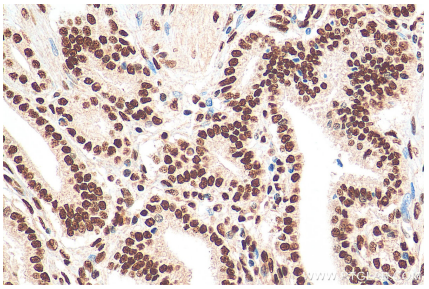
Selected Validation Data



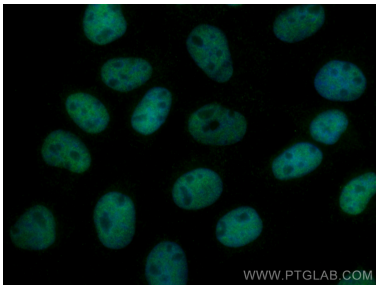
Various lysates were subjected to SDS PAGE followed by western blot with 67927-1-Ig (CREB1 antibody) at dilution of 1:20000 incubated at room temperature for 1.5 hours. The membrane was stripped and reblotted with HRP-conjugated GAPDH Monoclonal antibody (HRP-60004) as loading control.



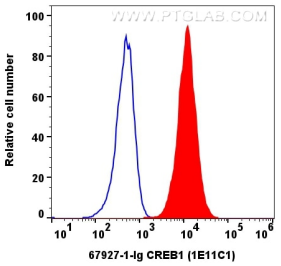
WB result of CREB1 antibody (67927-1-Ig; 1:5000; incubated at room temperature for 1.5 hours) with sh-Control and sh-CREB1 transfected HEK-293 cells.



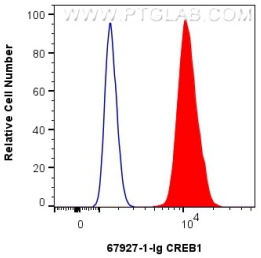
Immunohistochemical analysis of paraffin-embedded human prostate cancer tissue slide using 67927-1-Ig (CREB1 antibody) at dilution of 1:2000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed A431 cells using CREB1 antibody (67927-1-Ig, Clone: 1E11C1) at dilution of 1:8000 and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L).



1x10^6 Jurkat cells were intracellularly stained with 0.2 µg CREB1 Monoclonal antibody (67927-1-Ig, Clone:1E11C1,red) and Multi-rAb CoraLite® Plus 647-Goat Anti-Mouse Recombinant Secondary Antibody (H+L)(RGAM005),Mouse IgG1 isotype control (66360-1-Ig, Clone: 1F8D3, blue) was parallel stained as control. Cells were fixed with 4% PFA.



1x10^6 HEK-293 cells were intracellularly stained with 0.25 ug CREB1 Monoclonal antibody (67927-1-Ig, Clone:1E11C1) and CoraLite®488-Conjugated Goat Anti-Mouse IgG(H+L) (SA00013-1)(red), or 0.25 ug Mouse IgG1 isotype control Mouse McAb (66360-1-Ig, Clone: 1F8D3) (blue). Cells were fixed and permeabilized with Transcription Factor Staining Buffer Kit (PF00011).