

For Research Use Only

# CREB1 Monoclonal antibody

Catalog Number: 67927-1-Ig **3 Publications**



## Basic Information

<b>Catalog Number:</b> 67927-1-Ig	<b>GenBank Accession Number:</b> BC010636	<b>Purification Method:</b> Protein G purification
<b>Size:</b> 1000 µg/ml	<b>GeneID (NCBI):</b> 1385	<b>CloneNo.:</b> 1E11C1
<b>Source:</b> Mouse	<b>UNIPROT ID:</b> P16220	<b>Recommended Dilutions:</b> WB 1:5000-1:50000 IHC 1:1000-1:4000 IF 1:4000-1:16000
<b>Isotype:</b> IgG1	<b>Full Name:</b> cAMP responsive element binding protein 1	
<b>Immunogen Catalog Number:</b> AG2852	<b>Calculated MW:</b> 341 aa, 35 kDa	
	<b>Observed MW:</b> 43-46 kDa	

## Applications

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

**Cited Applications:**  
WB

**Species Specificity:**  
Human, Mouse, Rat

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

**IHC:** human prostate cancer tissue, human cervical cancer tissue

**IF:** A431 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
Wenyu Shi	38272326	Free Radic Biol Med	WB

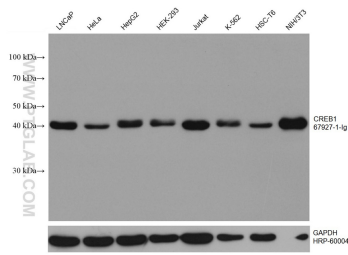
## Storage

**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

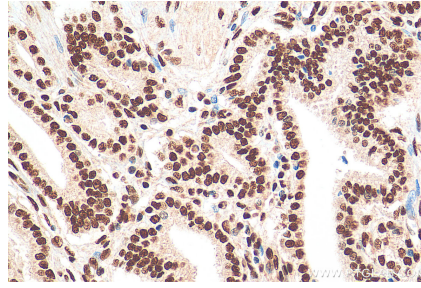
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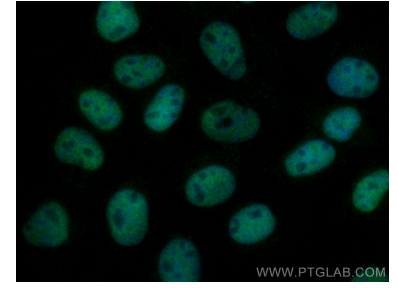
## Selected Validation Data



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.



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).