# abcam

# Product datasheet

# Anti-CREBBP antibody ab10489

4 References 2 Images

#### Overview

Product name Anti-CREBBP antibody

**Description** Rabbit polyclonal to CREBBP

Host species Rabbit

Tested applications
Suitable for: IP, WB
Species reactivity
Reacts with: Human

Predicted to work with: Chimpanzee

A

**Immunogen** Synthetic peptide corresponding to Human CREBBP. Within exon 17.

**Positive control** Lysate from HeLa cells.

General notes Cyclic AMP-responsive enhancer binding protein (CREB) binding protein (CBP) and p300 are

closely related transcriptional coactivators that have been shown to directly interact with many different DNA-binding transcription factors including nuclear hormone receptors, CREB (cyclic AMP-responsive enhancer binding protein), c-Fos, c-Jun/v-Jun, c-Myb/v-Myb, TFIIB and MyoD.Both CBP and p300 have been shown to display histone acetyltransferase (HAT) activity, capable of acetylating all four core histone particles in nucleosomes. As a result of HAT activity, it has been suggested CBP and p300 may play a direct role in activating chromatin for transcription. Single point mutations in CBP have been proposed as causative factors in the developmental abnormalities of Rubinstein-Taybi syndrome (RTS). Although both CBP and p300 appear to function similarly, the inability of p300 to rescue CBP malfunction iRTS suggests

intrinsic functional differences between CBP and p300.

The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

## **Properties**

Form Liquid

**Storage instructions** Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C.

Avoid freeze / thaw cycle.

Storage buffer pH: 7

Preservative: 0.1% Sodium azide

Constituents: 0.021% PBS, 1.764% Sodium citrate, 1.815% Tris

**Purity** Immunogen affinity purified

**Purification notes**Antibodies were affinity purified using the peptide immobilized on solid support.

Primary antibody notes Cyclic AMP-responsive enhancer binding protein (CREB) binding protein (CBP) and p300 are

closely related transcriptional coactivators that have been shown to directly interact with many different DNA-binding transcription factors including nuclear hormone receptors, CREB (cyclic

 $AMP\mbox{-responsive enhancer binding protein), c-Fos, c-Jun/v-Jun, c-Myb/v-Myb, TFIIB\mbox{ and}$ 

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developmental abnormalities of Rubinstein-Taybi syndrome (RTS). Although both CBP and p300 appear to function similarly, the inability of p300 to rescue CBP malfunction iRTS suggests

intrinsic functional differences between CBP and p300.

**Clonality** Polyclonal

**Isotype** IgG

#### **Applications**

#### The Abpromise guarantee

Our Abpromise guarantee covers the use of ab10489 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IP		Use a concentration of 1 - 4 μg/ml.
WB		Use a concentration of 0.4 µg/ml. Predicted molecular weight: 265 kDa.

### **Target**

**Function** Acetylates histones, giving a specific tag for transcriptional activation. Also acetylates non-histone

proteins, like NCOA3 coactivator. Binds specifically to phosphorylated CREB and enhances its transcriptional activity toward cAMP-responsive genes. Acts as a coactivator of ALX1 in the

presence of EP300.

**Involvement in disease**Note=Chromosomal aberrations involving CREBBP may be a cause of acute myeloid leukemias.

 $Translocation \ t(8;16)(p11;p13) \ with \ MYST3/MOZ; \ translocation \ t(11;16)(q23;p13.3) \ with \ MLL/HRX; \ translocation \ t(10;16)(q22;p13) \ with \ MYST4/MORF. \ MYST3-CREBBP \ may \ induce$ 

leukemia by inhibiting RUNX1-mediated transcription.

Defects in CREBBP are a cause of Rubinstein-Taybi syndrome type 1 (RSTS1) [MIM:180849]. RSTS1 is an autosomal dominant disorder characterized by craniofacial abnormalities, broad thumbs, broad big toes, mental retardation and a propensity for development of malignancies.

Sequence similarities Contains 1 bromo domain.

Contains 1 KIX domain.

Contains 2 TAZ-type zinc fingers.

Contains 1 ZZ-type zinc finger.

**Domain** The KIX domain mediates binding to HIV-1 Tat.

Post-translational Methylation of the KIX domain by CARM1 blocks association with CREB. This results in the

modifications blockade of CREB signaling, and in activation of apoptotic response.

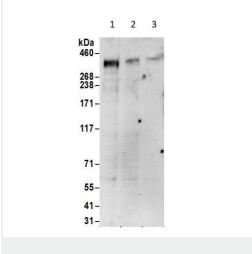
Phosphorylated upon DNA damage, probably by ATM or ATR.

Sumoylation negatively regulates transcriptional activity via the recruitment of DAAX.

Cytoplasm. Nucleus. Recruited to nuclear bodies by SS18L1/CREST. In the presence of ALX1

relocalizes from the cytoplasm to the nucleus.

#### **Images**



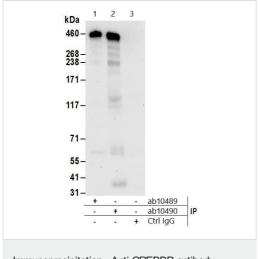
Western blot - Anti-CREBBP antibody (ab10489)

All lanes: Anti-CREBBP antibody (ab10489) at 0.4 µg/ml

Lane 1 : HeLa cell lysate at 50  $\mu$ g Lane 2 : HeLa cell lysate at 15  $\mu$ g Lane 3 : HeLa cell lysate at 5  $\mu$ g

Predicted band size: 265 kDa

Exposure time: 3 minutes



Immunoprecipitation - Anti-CREBBP antibody (ab10489)

ab10489 immunoprecipitating CREBBP at 6 µg/ml lysate.

**Lane 1:** Anti-CREBBP antibody ab10489 in HeLa whole cell extract (1 mg per IP reaction; 20% of IP loaded).

**Lane 2:** Anti-CREBBP antibody <u>ab10490</u> in HeLa whole cell extract (1 mg per IP reaction; 20% of IP loaded).

Lane 3: IgG control.

For blotting immunoprecipitated CREBBP, ab10489 was used at 1  $\mu g/mL$ .

**Detection:** Chemiluminescence with an exposure time of 30 seconds.

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