


Product datasheet

Anti-CREB antibody [E306] - BSA and Azide free ab221216

KO VALIDATED Recombinant RabMAb

[12 References](#) [4 Images](#)

Overview

Product name	Anti-CREB antibody [E306] - BSA and Azide free
Description	Rabbit monoclonal [E306] to CREB - BSA and Azide free
Host species	Rabbit
Specificity	This antibody recognizes CREB, and can also recognize the splice isoform of CREB.
Tested applications	Suitable for: WB, IHC-P
Species reactivity	Reacts with: Mouse, Rat, Human Predicted to work with: Cow 
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	ICC/IF: PC 12 cells. WB: A431 cell lysate. IHC-P: Prostatic carcinoma tissue.
General notes	<p>ab221216 is the carrier-free version of ab32515.</p> <p>Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.</p> <p>This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.</p> <p>Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.</p> <p>This product is compatible with the Maxpar[®] Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar[®] is a trademark of Fluidigm Canada Inc.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit</p>

monoclonal antibodies. For details on our patents, please refer to [RabMAb® patents](#).

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.20 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	E306
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab221216 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
WB		Use at an assay dependent concentration. Detects a band of approximately 40 kDa (predicted molecular weight: 37 kDa).
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Target

Function	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. Transcription activation is enhanced by the TORC coactivators which act independently of Ser-133 phosphorylation. Implicated in synchronization of circadian rhythmicity.
Involvement in disease	Defects in CREB1 may be a cause of angiomatoid fibrous histiocytoma (AFH) [MIM:612160]. A distinct variant of malignant fibrous histiocytoma that typically occurs in children and adolescents and is manifest by nodular subcutaneous growth. Characteristic microscopic features include lobulated sheets of histiocyte-like cells intimately associated with areas of hemorrhage and cystic pseudovascular spaces, as well as a striking cuffing of inflammatory cells, mimicking a lymph node metastasis. Note=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.
Sequence similarities	Belongs to the bZIP family. Contains 1 bZIP domain. Contains 1 KID (kinase-inducible) domain.

Post-translational modifications

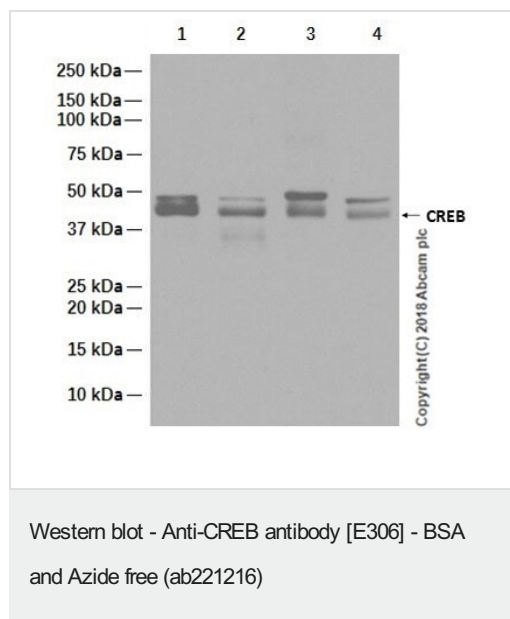
Stimulated by phosphorylation. Phosphorylation of both Ser-133 and Ser-142 in the SCN regulates the activity of CREB and participates in circadian rhythm generation. Phosphorylation of Ser-133 allows CREBBP binding (By similarity). Phosphorylated upon DNA damage, probably by ATM or ATR.

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.

Cellular localization

Nucleus.

Images



All lanes : Anti-CREB antibody [E306] ([ab32515](#)) at 0.03 µg/ml

Lane 1 : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2 : A431 (Human epidermoid carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 3 : PC-12 (Rat adrenal gland pheochromocytoma) whole cell lysate at 20 µg

Lane 4 : NIH/3T3 (Mouse embryonic fibroblast) whole cell lysate

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

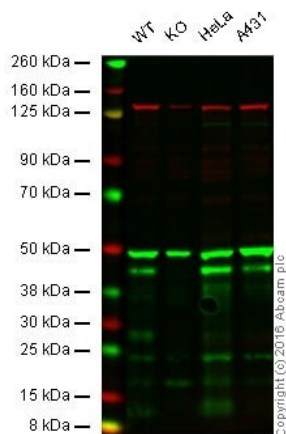
Predicted band size: 37 kDa

Observed band size: 40 kDa

Exposure time: 15 seconds

This data was developed using [ab32515](#), the same antibody clone in a different buffer formulation

Blocking and diluting buffer: 5% NFDN/TBST.



Western blot - Anti-CREB antibody [E306] - BSA and Azide free (ab221216)

This data was developed using [ab32515](#), the same antibody clone in a different buffer formulation:

Lane 1: Wild-type HAP1 cell lysate (20 µg)

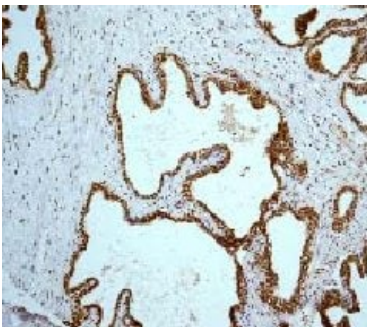
Lane 2: CREB knockout HAP1 cell lysate (20 µg)

Lane 3: HeLa cell lysate (20 µg)

Lane 4: A431 cell lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - [ab32515](#) observed at 44 kDa. Red - loading control, [ab18058](#), observed at 214 kDa.

[ab32515](#) was shown to recognize CREB in wild-type HAP1 cells along with additional cross-reactive bands. No band was observed when CREB knockout samples examined. Wild-type and knockout samples were subjected to SDS-PAGE. [ab32515](#) and [ab18058](#) (loading control to Vinculin) diluted to 1/500 and 1/10000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed ([ab216776](#)) secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CREB antibody [E306] - BSA and Azide free (ab221216)

Ab32515, at a 1/500 dilution, staining CREB in paraffin embedded human prostatic carcinoma tissue sections by Immunohistochemistry.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab32515](#)).

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-CREB antibody [E306] - BSA and Azide free
(ab221216)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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