abcam

Product datasheet

Anti-CUG-BP1 antibody [3B1] ab9549

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Overview

Product name Anti-CUG-BP1 antibody [3B1]

Description Mouse monoclonal [3B1] to CUG-BP1

Host species Mouse

Tested applications Suitable for: IHC-P, WB, ICC

Species reactivity Reacts with: Human

Predicted to work with: Mouse, Rat, Rabbit, Cow, Pig

Immunogen Recombinant full length protein. This information is proprietary to Abcam and/or its suppliers.

Positive control WB: HeLa, HEK-293T and SHSY-5Y cell lysates; Human kidney and brain tissue lysates. ICC:

HeLa cells. IHC: Human Breast cancer tissue

General notes

This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or

conjugation for your experiments, please contact $\underline{\text{\bf orders@abcam.com}}.$

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. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw

cycles.

Storage buffer pH: 7.40

Preservative: 0.02% Sodium azide Constituents: PBS, 6.97% L-Arginine

Purity Protein G purified

Clonality Monoclonal

Clone number 3B1

1

Light chain type lgG1 kappa

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab9549 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
IHC-P		Use a concentration of 5 μg/ml.
WB	****(1)	Use a concentration of 1 - 5 µg/ml. Detects a band of approximately 54 kDa (predicted molecular weight: 54 kDa).
ICC		Use a concentration of 1 - 5 μg/ml.

Target

Function

RNA-binding protein implicated in the regulation of several post-transcriptional events. Involved in pre-mRNA alternative splicing, mRNA translation and stability. Mediates exon inclusion and/or exclusion in pre-mRNA that are subject to tissue-specific and developmentally regulated alternative splicing. Specifically activates exon 5 inclusion of cardiac isoforms of TNNT2 during heart remodeling at the juvenile to adult transition. Acts as both an activator and repressor of a pair of coregulated exons: promotes inclusion of the smooth muscle (SM) exon but exclusion of the non-muscle (NM) exon in actinin pre-mRNAs. Activates SM exon 5 inclusion by antagonizing the repressive effect of PTB. Promotes exclusion of exon 11 of the INSR pre-mRNA. Inhibits, together with HNRNPH1, insulin receptor (IR) pre-mRNA exon 11 inclusion in myoblast. Increases translation and controls the choice of translation initiation codon of CEBPB mRNA. Increases mRNA translation of CEBPB in aging liver (By similarity). Increases translation of CDKN1A mRNA by antagonizing the repressive effect of CALR3. Mediates rapid cytoplasmic mRNA deadenylation. Recruits the deadenylase PARN to the poly(A) tail of EDEN-containing mRNAs to promote their deadenylation. Required for completion of spermatogenesis (By similarity). Binds to (CUG)n triplet repeats in the 3'-UTR of transcripts such as DMPK and to Bruno response elements (BREs). Binds to muscle-specific splicing enhancer (MSE) intronic sites flanking the alternative exon 5 of TNNT2 pre-mRNA. Binds to AU-rich sequences (AREs or EDEN-like) localized in the 3'-UTR of JUN and FOS mRNAs. Binds to the IR RNA. Binds to the 5'-region of CDKN1A and CEBPB mRNAs. Binds with the 5'-region of CEBPB mRNA in aging liver.

Tissue specificity

Ubiquitous.

Sequence similarities

Belongs to the CELF/BRUNOL family.

Contains 3 RRM (RNA recognition motif) domains.

Post-translational

modifications

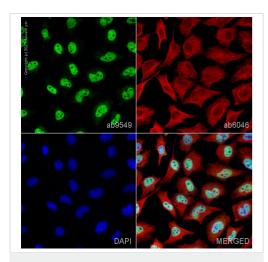
 $\label{prop:lated} Phosphorylated. \ Its phosphorylation \ status \ increases \ in senescent \ cells.$

Cellular localization

Nucleus. Cytoplasm. RNA-binding activity is detected in both nuclear and cytoplasmic

compartments.





Immunocytochemistry - Anti-CUG-BP1 antibody [3B1] (ab9549)



Western blot - Anti-CUG-BP1 antibody [3B1] (ab9549)

ab9549 staining CUG-BP1 in HeLa cells. The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% PBS-Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab9549 at 1 µg/ml and ab6046, Rabbit polyclonal to beta Tubulin - Loading Control. Cells were then incubated with ab150117, Goat polyclonal Secondary Antibody to Mouse IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution (shown in green) and ab150080, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 594) at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).

Also suitable in cells fixed with 100% methanol (5 min).

Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.

All lanes: Anti-CUG-BP1 antibody [3B1] (ab9549) at 1 µg/ml

Lane 1 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate

Lane 2 : SHSY-5Y (Human neuroblastoma cell line) Whole Cell Lysate

Lane 3: Human kidney tissue lysate - total protein (ab30203)

Lysates/proteins at 10 µg per lane.

Secondary

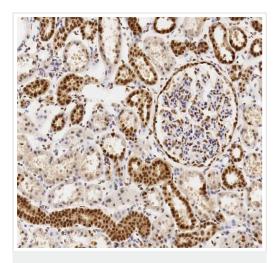
 $\begin{tabular}{ll} \textbf{All lanes:} Goat polyclonal to Mouse $\lg G$ - H\&L - Pre-Adsorbed (HRP) at 1/5000 dilution \end{tabular}$

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 54 kDa Observed band size: 54 kDa

Exposure time: 20 minutes



Immunohistochemistry (Formalin/PFA-fixed paraffinembedded sections) - Anti-CUG-BP1 antibody [3B1] (ab9549)

IHC image of CUG-BP1 staining in human normal kidney formalin fixed paraffin embedded tissue section*, performed on a Leica Bond™ system using the standard protocol F. The section was pretreated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab9549, 5µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

*Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre

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