

Product datasheet

Anti-KAT13D / CLOCK antibody ab3517

★★★★★ 5 Abreviews 40 References 7 Images

Overview

Product name	Anti-KAT13D / CLOCK antibody
Description	Rabbit polyclonal to KAT13D / CLOCK
Host species	Rabbit
Tested applications	Suitable for: ICC, IHC-P, WB
Species reactivity	Reacts with: Mouse, Human
Immunogen	Synthetic peptide corresponding to Mouse KAT13D/ CLOCK aa 1-100. Run BLAST with ExPASy Run BLAST with NCBI
Positive control	WB: human HeLa, mouse NIH-3T3 and skeletal muscle tissue; IHC: human skeletal muscle, colon tissue, mouse colon tissue; ICC: human U251 cells
General notes	<p>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.</p> <p>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</p>

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 or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 99% PBS
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee

Our [Abpromise guarantee](#) covers the use of ab3517 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
ICC		1/10 - 1/200.
IHC-P	★★★★★ (1)	1/100 - 1/1000. Immunohistochemical staining of CLOCK in hamster brain results in the staining of the superchiasmatic nucleus.
WB	★★★★★ (3)	1/200 - 1/2000. Detects a band of approximately 100 kDa (predicted molecular weight: 95 kDa).

Target

Function

ARNTL/2-CLOCK heterodimers activate E-box element (3'-CACGTG-5') transcription of a number of proteins of the circadian clock. Activates transcription of PER1 and PER2. This transcription is inhibited in a feedback loop by PER and CRY proteins. Has intrinsic histone acetyltransferase activity and this enzymatic function contributes to chromatin-remodeling events implicated in circadian control of gene expression (By similarity). Acetylates primarily histones H3 and H4 (By similarity). Acetylates also a non-histone substrate: ARNTL.

Tissue specificity

Expressed in all tissues examined including spleen, thymus, prostate, testis, ovary, small intestine, colon, leukocytes, heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas. Highest levels in testis and skeletal muscle. Low levels in thymus, lung and liver. Expressed in all brain regions with highest levels in cerebellum. Highly expressed in the suprachiasmatic nucleus (SCN).

Sequence similarities

Contains 1 basic helix-loop-helix (bHLH) domain.
Contains 1 PAC (PAS-associated C-terminal) domain.
Contains 2 PAS (PER-ARNT-SIM) domains.

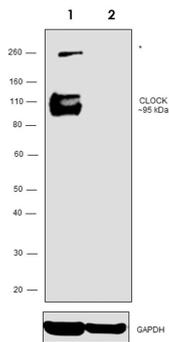
Post-translational modifications

Phosphorylation is dependent on CLOCK-ARNTL heterodimer formation.

Cellular localization

Cytoplasm. Nucleus. Shuffling between the cytoplasm and the nucleus is under circadian regulation and is ARNTL-dependent. Phosphorylated form located in the nucleus.

Images



Western blot - Anti-KAT13D / CLOCK antibody (ab3517)

All lanes : Anti-KAT13D / CLOCK antibody (ab3517) at 1/2000 dilution

Lane 1 : Mouse skeletal muscle tissue

Lane 2 : Mouse liver tissue

Lysates/proteins at 30 µg per lane.

Secondary

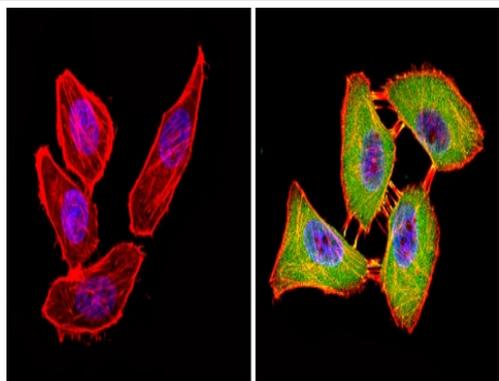
Lane 1 : Goat anti-Rabbit IgG (H+L) Superclonal™ Recombinant Secondary Antibody, HRP at 1/4000 dilution

Lane 2 : oat anti-Rabbit IgG (H+L) Superclonal™ Recombinant Secondary Antibody, HRP at 1/4000 dilution

Developed using the ECL technique.

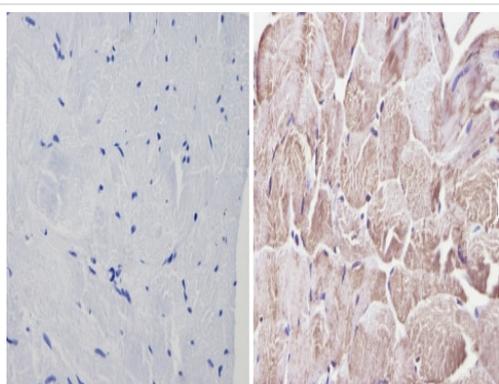
Predicted band size: 95 kDa

Electrophoresis performed on a 4-12% BisTris gel and proteins transferred onto a nitrocellulose membrane.



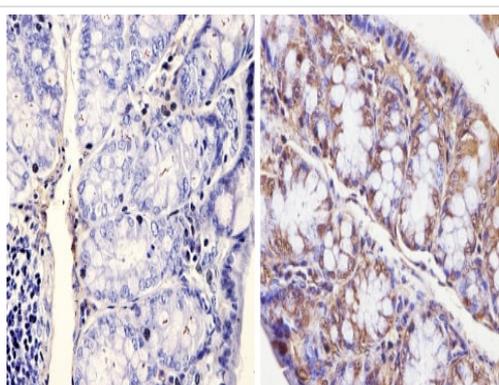
Immunocytochemistry - Anti-KAT13D / CLOCK antibody (ab3517)

Immunocytochemistry/immunofluorescence analysis of U251 cells labeling KAT13D/CLOCK (green) with ab3517 at 1/100. Cells were fixed with formalin and permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 1% BSA in PBS for 30 minutes at room temperature. Cells were incubated with the primary antibody overnight at 4°C. A DyLight-conjugated secondary antibody was used. F-actin (red) was stained with phalloidin and nuclei (blue) were stained with Hoechst or DAPI. 60X magnification. Left - negative control.



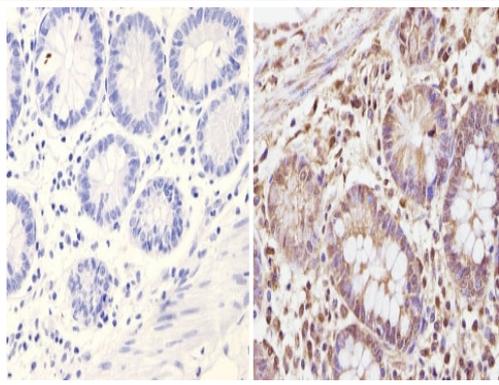
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KAT13D / CLOCK antibody (ab3517)

ab3517 labelling KAT13D in the nucleus and cytoplasm of Human skeletal muscle tissue (right) compared with a negative control (left) by Immunohistochemistry (formalin/PFA-fixed paraffin-embedded sections). To expose target proteins, antigen retrieval method was performed using 10mM sodium citrate (pH 6.0) microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H₂O₂-methanol for 15 min at room temperature. Tissue sections were incubated with the primary antibody (1:200 in 3% BSA-PBS) overnight at 4°C. A HRP-conjugated anti-rabbit IgG was used as the secondary antibody, followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.



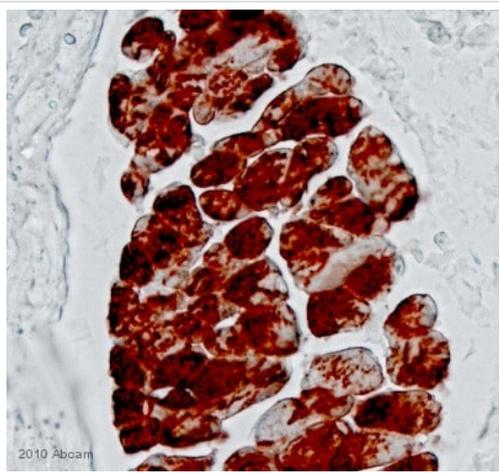
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KAT13D / CLOCK antibody (ab3517)

ab3517 labelling KAT13D in the nucleus and cytoplasm of Mouse colon tissue (right) compared with a negative control (left) by Immunohistochemistry (formalin/PFA-fixed paraffin-embedded sections). To expose target proteins, antigen retrieval method was performed using 10mM sodium citrate (pH 6.0) microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H₂O₂-methanol for 15 min at room temperature. Tissue sections were incubated with the primary antibody (1:200 in 3% BSA-PBS) overnight at 4°C. A HRP-conjugated anti-rabbit IgG was used as the secondary antibody, followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KAT13D / CLOCK antibody (ab3517)

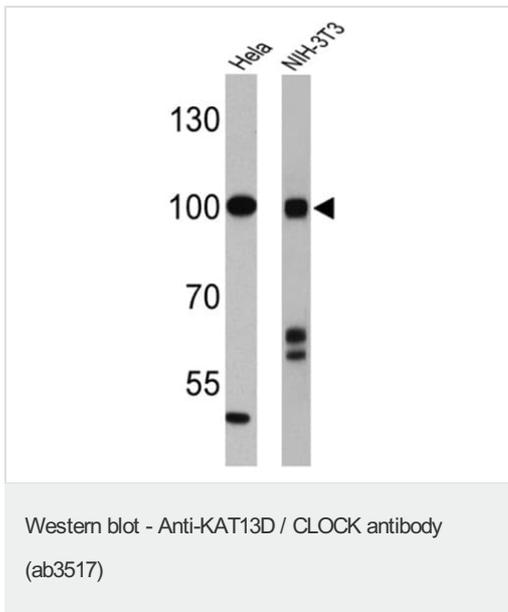
ab3517 labelling KAT13D in the nucleus and cytoplasm of Human colon tissue (right) compared with a negative control (left) by Immunohistochemistry (formalin/PFA-fixed paraffin-embedded sections). To expose target proteins, antigen retrieval method was performed using 10mM sodium citrate (pH 6.0) microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H₂O₂-methanol for 15 min at room temperature. Tissue sections were incubated with the primary antibody (1:200 in 3% BSA-PBS) overnight at 4°C. A HRP-conjugated anti-rabbit IgG was used as the secondary antibody, followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KAT13D / CLOCK antibody (ab3517)

This image is courtesy of an anonymous Abreview

ab3517 staining KAT13D/CLOCK in Mouse skeletal muscle tissue sections by IHC-P (Paraformaldehyde-fixed, paraffin-embedded tissue sections). Tissue was fixed with paraformaldehyde and blocked with 10% serum for 1 hour at 20°C; antigen retrieval was by heat mediation in citrate buffer pH6. Samples were incubated with primary antibody (1/400 in PBS) for 12 hours at 4°C. Undiluted [ab64256](#) was used as the secondary antibody.



All lanes : Anti-KAT13D / CLOCK antibody (ab3517) at 1/4000 dilution

Lane 1 : HeLa cell lysate

Lane 2 : NIH-3T3 cell lysate

Lysates/proteins at 25 µg per lane.

Predicted band size: 95 kDa

Observed band size: 100 kDa

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