

Product datasheet

Anti-KAT3B / p300 antibody - CHIP Grade ab10485

★★★★★ 3 Abreviews 5 References 5 图像

概述

产品名称	Anti-KAT3B / p300抗体- CHIP Grade
描述	兔多克隆抗体to KAT3B / p300 - CHIP Grade
宿主	Rabbit
经测试应用	适用于: IP, WB, IHC-P, CHIPseq
种属反应性	与反应: Human 预测可用于: Chimpanzee, Rhesus monkey, Gorilla, Orangutan
免疫原	Synthetic peptide within Human KAT3B/ p300 aa 950-1000. The exact sequence is proprietary. NP_001420.2 Database link: Q09472 (Peptide available as ab4914)
阳性对照	WB: MCF7, HeLa, HEK-293T and Jurkat cell lysate. IHC-P: Human lung carcinoma tissue. IP: HeLa whole cell lysate.

性能

形式	Liquid
存放说明	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
存储溶液	Preservative: 0.09% Sodium azide Constituent: Tris citrate/phosphate pH 7 to 8
纯度	Immunogen affinity purified
纯化说明	ab10485 was affinity purified using the peptide immobilized on solid support.
克隆	多克隆
同种型	IgG

应用

Our [Abpromise guarantee](#) covers the use of **ab10485** in the following tested applications.

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

应用	Ab评论	说明
IP		Use at 1-4 µg/mg of lysate.
WB	★★★★★	1/5000 - 1/25000. Can be blocked with KAT3B / p300 peptide (ab4914) .
IHC-P	★★★★★	1/1000 - 1/5000. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
CHIPseq		Use at an assay dependent concentration. PubMed: 26988756

靶标

功能

Functions as histone acetyltransferase and regulates transcription via chromatin remodeling. Acetylates all four core histones in nucleosomes. Histone acetylation gives an epigenetic tag for transcriptional activation. Mediates cAMP-gene regulation by binding specifically to phosphorylated CREB protein. Mediates acetylation of histone H3 at 'Lys-122' (H3K122ac), a modification that localizes at the surface of the histone octamer and stimulates transcription, possibly by promoting nucleosome instability. Mediates acetylation of histone H3 at 'Lys-27' (H3K27ac). Also functions as acetyltransferase for nonhistone targets. Acetylates 'Lys-131' of ALX1 and acts as its coactivator. Acetylates SIRT2 and is proposed to indirectly increase the transcriptional activity of TP53 through acetylation and subsequent attenuation of SIRT2 deacetylase function. Acetylates HDAC1 leading to its inactivation and modulation of transcription. Acts as a TFAP2A-mediated transcriptional coactivator in presence of CITED2. Plays a role as a coactivator of NEUROD1-dependent transcription of the secretin and p21 genes and controls terminal differentiation of cells in the intestinal epithelium. Promotes cardiac myocyte enlargement. Can also mediate transcriptional repression. Binds to and may be involved in the transforming capacity of the adenovirus E1A protein. In case of HIV-1 infection, it is recruited by the viral protein Tat. Regulates Tat's transactivating activity and may help inducing chromatin remodeling of proviral genes. Acetylates FOXO1 and enhances its transcriptional activity. Acetylates BCL6 which disrupts its ability to recruit histone deacetylases and hinders its transcriptional repressor activity. Participates in CLOCK or NPAS2-regulated rhythmic gene transcription; exhibits a circadian association with CLOCK or NPAS2, correlating with increase in PER1/2 mRNA and histone H3 acetylation on the PER1/2 promoter. Acetylates MTA1 at 'Lys-626' which is essential for its transcriptional coactivator activity (PubMed:10733570, PubMed:11430825, PubMed:11701890, PubMed:12402037, PubMed:12586840, PubMed:12929931, PubMed:14645221, PubMed:15186775, PubMed:15890677, PubMed:16617102, PubMed:16762839, PubMed:18722353, PubMed:18995842, PubMed:23415232, PubMed:23911289, PubMed:23934153, PubMed:8945521). Acetylates XBP1 isoform 2; acetylation increases protein stability of XBP1 isoform 2 and enhances its transcriptional activity (PubMed:20955178). Acetylates PCNA; acetylation promotes removal of chromatin-bound PCNA and its degradation during nucleotide excision repair (NER) (PubMed:24939902). Acetylates MEF2D.

疾病相关

Defects in EP300 may play a role in epithelial cancer.
 Chromosomal aberrations involving EP300 may be a cause of acute myeloid leukemias.
 Translocation t(8;22)(p11;q13) with KAT6A.
 Rubinstein-Taybi syndrome 2

序列相似性

Contains 1 bromo domain.

Contains 1 CBP/p300-type HAT (histone acetyltransferase) domain.

Contains 1 KIX domain.

Contains 2 TAZ-type zinc fingers.

Contains 1 ZZ-type zinc finger.

结构域

The CRD1 domain (cell cycle regulatory domain 1) mediates transcriptional repression of a subset of p300 responsive genes; it can be de-repressed by CDKN1A/p21WAF1 at least at some promoters. It contains sumoylation and acetylation sites and the same lysine residues may be targeted for the respective modifications. It is proposed that deacetylation by SIRT1 allows sumoylation leading to suppressed activity.

翻译后修饰

Acetylated on Lys at up to 17 positions by intermolecular autocatalysis. Deacetylated in the transcriptional repression domain (CRD1) by SIRT1, preferentially at Lys-1020. Deacetylated by SIRT2, preferentially at Lys-418, Lys-423, Lys-1542, Lys-1546, Lys-1549, Lys-1699, Lys-1704 and Lys-1707.

Citrullinated at Arg-2142 by PADI4, which impairs methylation by CARM1 and promotes interaction with NCOA2/GRIP1.

Methylated at Arg-580 and Arg-604 in the KIX domain by CARM1, which blocks association with CREB, inhibits CREB signaling and activates apoptotic response. Also methylated at Arg-2142 by CARM1, which impairs interaction with NCOA2/GRIP1.

Sumoylated; sumoylation in the transcriptional repression domain (CRD1) mediates transcriptional repression. Desumoylated by SENP3 through the removal of SUMO2 and SUMO3.

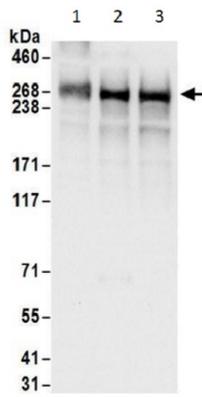
Probable target of ubiquitination by FBXO3, leading to rapid proteasome-dependent degradation.

Phosphorylated by HIPK2 in a RUNX1-dependent manner. This phosphorylation that activates EP300 happens when RUNX1 is associated with DNA and CBFβ. Phosphorylated by ROCK2 and this enhances its activity. Phosphorylation at Ser-89 by AMPK reduces interaction with nuclear receptors, such as PPARG.

细胞定位

Cytoplasm. Nucleus. In the presence of ALX1 relocalizes from the cytoplasm to the nucleus. Colocalizes with ROCK2 in the nucleus.

图片



Western blot - Anti-KAT3B / p300 antibody - ChIP
Grade (ab10485)

All lanes : Anti-KAT3B / p300 antibody - ChIP
Grade (ab10485) at 0.1 µg/ml

Lane 1 : HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate

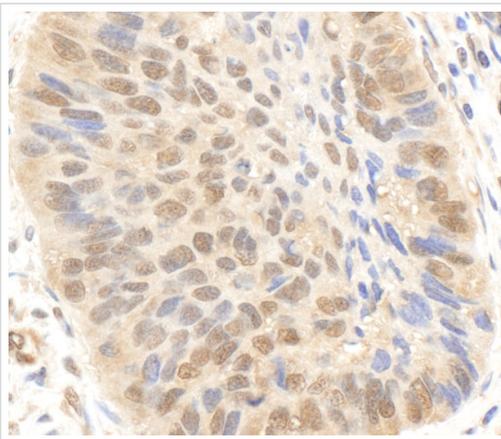
Lane 2 : HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate

Lane 3 : Jurkat (human T cell leukemia cell line from peripheral blood) whole cell lysate

Lysates/proteins at 50 µg per lane.

Developed using the ECL technique.

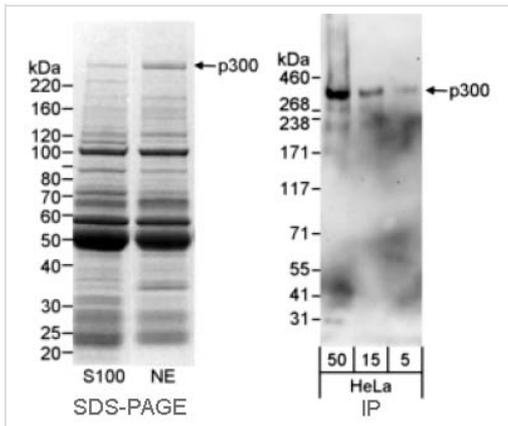
Exposure time: 3 seconds



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KAT3B / p300 antibody - ChIP Grade (ab10485)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human lung carcinoma tissue labeling KAT3B / p300 with ab10485 at 1/1000 (1 µg/ml).

Detection: DAB.



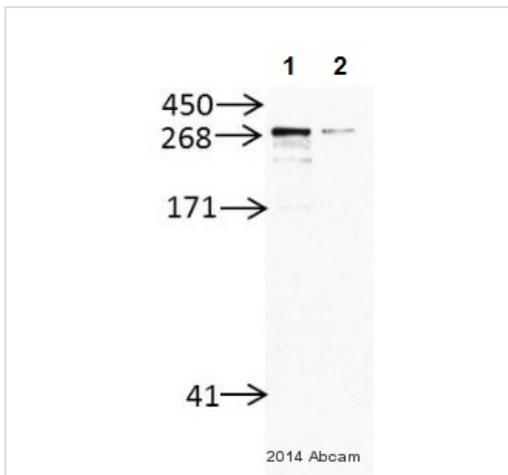
Immunoprecipitation - Anti-KAT3B / p300 antibody - ChIP Grade (ab10485)

ab10485 detecting p300 in HeLa (human epithelial cell line from cervix adenocarcinoma) cells by Immunoprecipitation .

Left-hand panel represents a coomassie-blue stained gel loaded with 10mg of HeLa cytosolic (S100) and nuclear (NE) extracts;

For the immunoprecipitation experiment (right-hand panel), ab10485 was used at a concentration of 20 µg/10 mg of HeLa whole cell lysate (lanes correspond to 5, 15 and 50 µg of lysate). The flow-through was analysed by WB using ab10485 at a concentration of 0.04 µg/ml.

The identity of the band marked as "p300" was also confirmed using mass spectrometry.



Western blot - Anti-KAT3B / p300 antibody - ChIP Grade (ab10485)

This image is courtesy of an anonymous Abreview

All lanes : Anti-KAT3B / p300 antibody - ChIP Grade (ab10485) at 1/5000 dilution

Lane 1 : Human MCF-7 Cell Lysate

Lane 2 : MDA-MB-231 Cell Lysate

Lysates/proteins at 50000 cells per lane.

Secondary

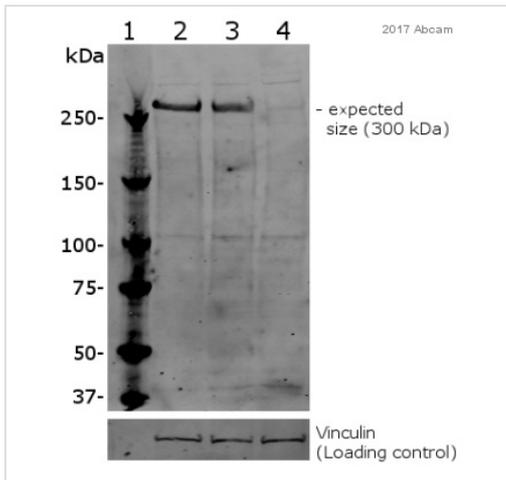
All lanes : Anti-Rabbit IgG VHH Single Domain (HRP) ([ab191866](#))

Developed using the ECL technique.

Performed under reducing conditions.

Exposure time: 3 minutes

Blocking Solution and Diluent 5% milk in TBS



Western blot - Anti-KAT3B / p300 antibody - ChIP
Grade (ab10485)

This image is courtesy of an abreview by Florian Handle

All lanes : Anti-KAT3B / p300 antibody - ChIP
Grade (ab10485) at 1/4000 dilution

Lane 2 : PC3 cell lysate. (parent cell line) with
BSA for 30 minutes at 20°C

Lane 3 : PC3 with dox. inducible p300
shRNA, untreated with BSA for 30 minutes at
20°C

Lane 4 : PC3 with dox. inducible p300
shRNA, doxycycline treated with 60 ng/ml
doxycycline for 72 hours for shRNA induction
with BSA for 30 minutes at 20°C

Lysates/proteins at 38 µg per lane.

Blocking peptides at 5 % per lane.

Secondary

All lanes : IRDye 680RD Goat anti-Rabbit IgG
(H + L) at 1/15000 dilution

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