


Anti-KAT3B / p300 antibody [3G230 / NM-11] - ChIP Grade ab14984

★★★★★ [11 Abreviews](#) [74 References](#) [4 图像](#)

概述

产品名称	Anti-KAT3B / p300抗体[3G230 / NM-11] - ChIP Grade
描述	小鼠单克隆抗体[3G230 / NM-11] to KAT3B / p300 - ChIP Grade
宿主	Mouse
特异性	Published data suggest that this antibody cross-reacts with both CBP and P300 (PMID: 8995708 and 9219037). This paper (PMID: 9219037) also maps the epitope of this antibody to 2071-2091 of CBP.
经测试应用	适用于: WB, ChIP
种属反应性	与反应: Human 预测可用于: Rat 
免疫原	Recombinant full length protein corresponding to Human KAT3B/ p300.
阳性对照	WB: HeLa and Jurkat whole cell lysates.
常规说明	<p>This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com.</p> <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>

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 or -80°C. Avoid freeze / thaw cycle.
存储溶液	<p>pH: 7.40</p> <p>Preservative: 0.02% Sodium azide</p> <p>Constituents: PBS, 6.97% L-Arginine</p>

纯度	Protein G purified
克隆	单克隆
克隆编号	3G230 / NM-11
同种型	IgG1
轻链类型	kappa

应用

The Abpromise guarantee **Abpromise™**承诺保证使用ab14984于以下的经测试应用

“应用说明”部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
WB	★★★★★ (5)	Use a concentration of 1 µg/ml. Detects a band of approximately 300 kDa (predicted molecular weight: 300 kDa). We recommend using 3% milk as the blocking agent in Western Blot.
ChIP	★★★★★ (3)	Use 2µg for 10 ⁶ cells.

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 wich 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

	<p>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.</p>
疾病相关	<p>Defects in EP300 may play a role in epithelial cancer.</p> <p>Chromosomal aberrations involving EP300 may be a cause of acute myeloid leukemias.</p> <p>Translocation t(8;22)(p11;q13) with KAT6A.</p> <p>Rubinstein-Taybi syndrome 2</p>
序列相似性	<p>Contains 1 bromo domain.</p> <p>Contains 1 CBP/p300-type HAT (histone acetyltransferase) domain.</p> <p>Contains 1 KIX domain.</p> <p>Contains 2 TAZ-type zinc fingers.</p> <p>Contains 1 ZZ-type zinc finger.</p>
结构域	<p>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.</p>
翻译后修饰	<p>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.</p> <p>Citrullinated at Arg-2142 by PADI4, which impairs methylation by CARM1 and promotes interaction with NCOA2/GRIP1.</p> <p>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.</p> <p>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.</p> <p>Phosphorylated by HIPK2 in a RUNX1-dependent manner. This phosphorylation that activates EP300 happens when RUNX1 is associated with DNA and CBFB. Phosphorylated by ROCK2 and this enhances its activity. Phosphorylation at Ser-89 by AMPK reduces interaction with nuclear receptors, such as PPARG.</p>
细胞定位	<p>Cytoplasm. Nucleus. In the presence of ALX1 relocates from the cytoplasm to the nucleus. Colocalizes with ROCK2 in the nucleus.</p>

图片

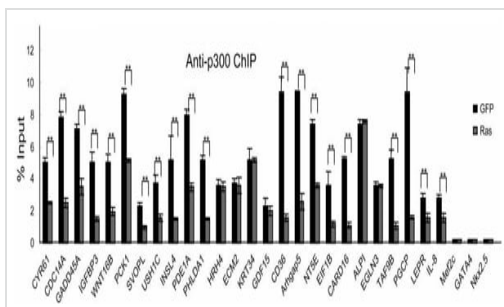


Image from Liu Y et al., J Biol Chem. 2012;287(49):41469-80. Fig 5(B).; doi: 10.1074/jbc.M112.367847.

- ChIP Grade (ab14984)

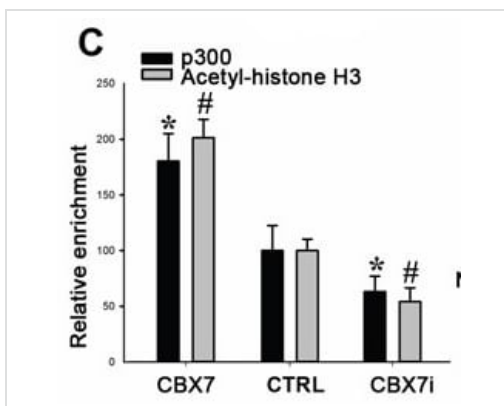
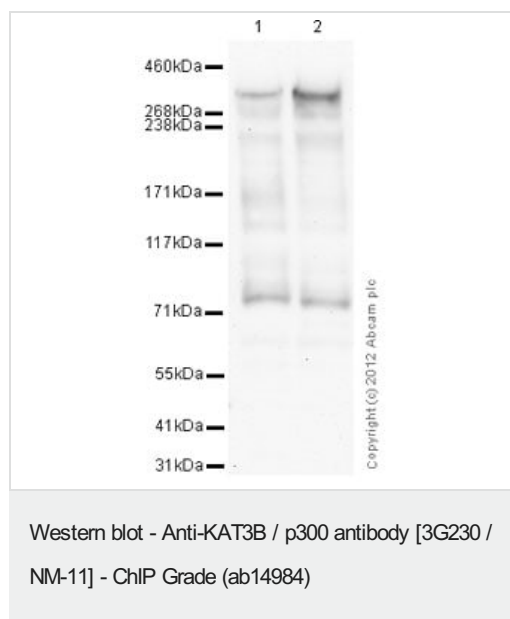


Image from Ni S et al., *Oncotarget*. 2017;8(5):8010-8021. Fig 5C.; doi: 10.18632/oncotarget.14037.

ChIP was performed on HeLa chromatin from 4 million cells using 8ug of ab14984. Positive control locus IRS2 shows enrichment over the negative control MyoD as expected.

This data was provided by an anonymous collaborator.

ChIP assay was performed using a ChIP qPCR Assay Kit. The bound PTEN promoter sequence was verified using RT-PCR (Real-Time polymerase chain reaction) assay with DNA fragments immunoprecipitated by anti-p300 antibodies (ab14984), anti-acetylhistone H3, or control rabbit IgG. The DNA fragments were amplified by quantitative RT-PCR. The RT-PCR primers are 5'-CGG GCG GTG ATG TGG C-3' and 5'-GCC TCA CAG CGG CTC AAC TCT-3'.



All lanes : Anti-KAT3B / p300 antibody [3G230 / NM-11] - ChIP Grade (ab14984) at 5 µg/ml

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

Lane 2 : Jurkat nuclear extract lysate ([ab14844](#))

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat polyclonal Secondary Antibody to Mouse IgG - H&L (HRP), pre-adsorbed at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 300 kDa

Observed band size: 300 kDa

Additional bands at: 75 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 20 minutes

This blot was produced using a 3-8% Tris Acetate gel under the TA buffer system. The gel was run at 150V for 60 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 3% Milk before being incubated with ab14984 overnight at 4°C. Antibody binding was detected using an anti-mouse secondary antibody conjugated to HRP, and visualised using ECL development solution.

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