

Human KAT3B / p300 ELISA Kit ab282866

重组 SimpleStep ELISA

5 图像

概述

产品名称 人KAT3B / p300 ELISA试剂盒

检测方法 Colorimetric

批次内				
样品	n	Mean	SD	CV%
Extract	8			7.1%

批次间				
样品	n	Mean	SD	CV%
Extract	3			4.9%

样品类型 Cell culture extracts, Cell Lysate

检测类型 Sandwich (quantitative)

灵敏度 51 pg/ml

范围 94 pg/ml - 6000 pg/ml

特定样本回收率		
样品类型	平均%	范围
Cell culture extracts	109	105% - 115%
Cell Lysate	104	101% - 112%

检测时间 1h 30m

实验步骤 One step assay

种属反应性 与反应: Human

产品概述 Human KAT3B ELISA kit (ab282866) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of Human KAT3B protein in human cell culture samples. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human KAT3B with 51 pg/mL sensitivity.

SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits:

- Single-wash protocol reduces assay time to 90 minutes or less
- High sensitivity, specificity and reproducibility from superior antibodies
- Fully validated in biological samples
- 96-wells plate breakable into 12 x 8 wells strips

A 384-well SimpleStep ELISA® microplate ([ab203359](#)) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits.

说明

Histone acetyltransferase p300 (KAT3B/P300), also known as p300 HAT and KAT3B, is an enzyme encoded by the KAT3B/P300 gene. KAT3B/P300 functions as histone acetyltransferase that regulates transcription via chromatin remodeling. It mediates cAMP-gene regulation by binding specifically to phosphorylated CREB protein. KAT3B/P300 has also been shown to be a co-activator of HIF1A (hypoxia-inducible factor 1 alpha) and plays a role in the stimulation of hypoxia-induced genes such as VEGF. Defects in this gene have been thought to be associated to Rubinstein-Taybi syndrome, Menke-Hennekam syndrome 2, and epithelial cancer.

Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.

It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

平台

Pre-coated microplate (12 x 8 well strips)

性能

存放说明

Store at +4°C. Please refer to protocols.

组件	标识符	1 x 96 tests
Stop Solution		—
10X Human KAT3B / p300 Capture Antibody		1 x 600µl
10X Human KAT3B / p300 Detector Antibody		1 x 600µl
10X Wash Buffer PT (ab206977)		1 x 20ml
50X Cell Extraction Enhancer Solution (ab193971)		1 x 1ml
5X Cell Extraction Buffer PTR (ab193970)		1 x 10ml
Antibody Diluent CPR2		1 x 6ml
Human KAT3B / p300 Lyophilized Recombinant Protein		2 vials

组件	标识符	1 x 96 tests
Plate Seals		1 unit
Sample Diluent NS (ab193972)		1 x 12ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)		1 unit
TMB Development Solution		1 x 12ml

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

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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.

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 PAD14, 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 CBFB. Phosphorylated by ROCK2 and this enhances its activity. Phosphorylation at Ser-89 by AMPK reduces interaction with nuclear receptors, such as PPARγ.

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


细胞定位

图片


Powered by
recombinant antibodies




Research with
confidence
Consistent and
reproducible results



Long-term and
scalable supply
Recombinant
technology



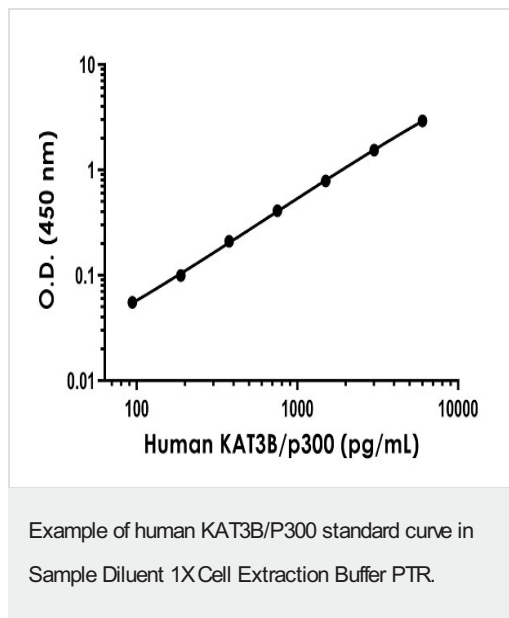
Success from the
first experiment
Confirmed
specificity



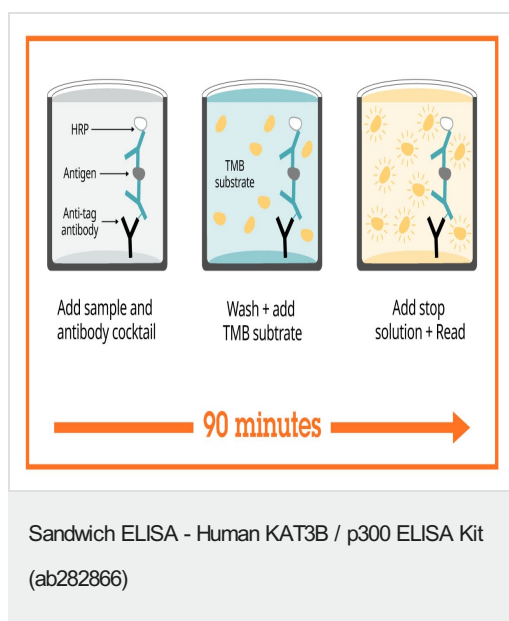
Ethical standards
compliant
Animal-free
production

Recombinant Antibody Benefits

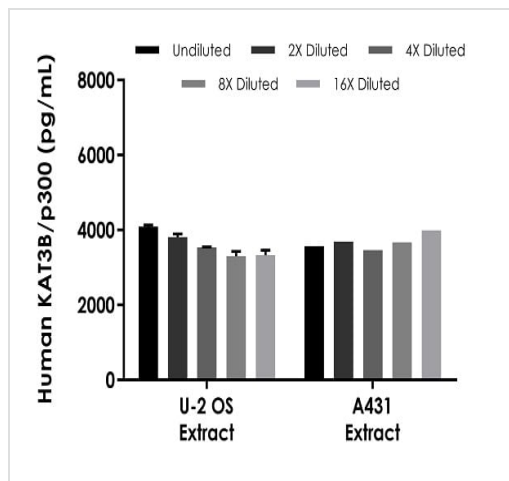
To learn more about the advantages of recombinant antibodies see [here](#).



The KAT3B/P300 standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean \pm SD) are graphed.



SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



The concentrations of KAT3B/P300 were measured in duplicate and interpolated from the KAT3B/P300 standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2).

Interpolated concentrations of native KAT3B/P300 in human U-2 OS and A431 cell extract samples based on a 200 µg/mL and 2,000 µg/ml extract load respectively.

Get more done with SimpleStep ELISA



Easy to use
Single-wash 90-minute protocol



Flexible
Matched antibody pairs available



Precision antibodies
High sensitivity, specificity and reproducibility



Scalable
Now in 10-pack and 384-well formats

To learn more about the advantages of SimpleStep ELISA® kits see [here](#).

Sandwich ELISA - Human KAT3B / p300 ELISA Kit
(ab282866)

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

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