Datasheet for ABIN5596809

anti-Acetylated Lysine antibody

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Overview

Quantity:	100 µg
Target:	Acetylated Lysine
Reactivity:	Various Species
Host:	Rabbit
Clonality:	Polyclonal
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC), Immunoprecipitation (IP), Flow Cytometry (FACS), Fluorescence Microscopy (FM)

Product Details

Purpose:	Lysine Acetylated Antibody
Immunogen:	Immunogen: Anti-Lysine Acetylated Antibody was prepared from whole rabbit serum produced by repeated immunizations with acetylated lysine conjugated KLH. Immunogen Type: Other
Isotype:	IgG
Cross-Reactivity (Details):	Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Rabbit IgG.
Characteristics:	Synonyms: acetyl Lysine antibody, Acetylated lysine antibody, Lysine antibody
Purification:	Anti-Lysine Acetylated Antibody was prepared from monospecific antiserum by immunoaffinity chromatography using acetylated lysine peptide coupled to agarose.
Sterility:	Sterile filtered

Target Details

Target:	Acetylated Lysine
Alternative Name:	Lysine Acetylated (Acetylated Lysine Products)
Target Type:	Chemical
Background:	Background: Acetylation refers to the process of introducing an acetyl group into a compound. Proteins are typically acetylated on lysine residues and this reaction relies on acetyl-coenzyme A as the acetyl group donor. Acetylated Lysine antibody is useful in Cancer, Cell Biology and Chromatin & Nuclear Signaling research.

Application Details

Application Notes:	Flow Cytometry Dilution: User Optimized Immunohistochemistry Dilution: User Optimized Application Note: Anti-Lysine Acetylated Antibody is suitable for use in ELISA, western blotting, immunofluorescence microscopy, and immunoprecipitation assays. Although not tested, this antibody is likely functional in RIA, flow cytometry, and immunohistochemistry. Western Blot Dilution: 1:500-1:1,000 Immunoprecipitation Dilution: 10 µg/mg protein sample ELISA Dilution: 1:1,000-1:2,500 IF Microscopy Dilution: User Optimized Other: User Optimized
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	1.0 mg/mL
Buffer:	Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 Stabilizer: 50 % (v/v) Glycerol Preservative: None
Preservative:	Without preservative
Storage:	4 °C,-20 °C
Storage Comment:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted

Handling

	liquid. Dilute only prior to immediate use.
Expiry Date:	12 months

Publications

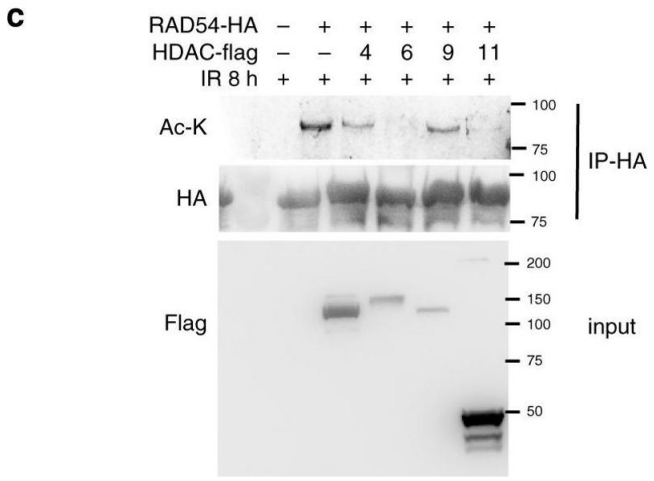
Product cited in:

Zhou, Huang, Zhang, Zhao, Kim, Tu, Zhang, Nowsheen, Zhu, Deng, Chen, Qin, Luo, Liu, Lou, Mutter, Yuan: "The bromodomain containing protein BRD-9 orchestrates RAD51-RAD54 complex formation and regulates homologous recombination-mediated repair." in: **Nature communications**, Vol. 11, Issue 1, pp. 2639, (2020) (PubMed).

Lin, Yuan, Pei, Liu, Ann, Lou: "KAP1 Deacetylation by SIRT1 Promotes Non-Homologous End-Joining Repair." in: **PLoS ONE**, Vol. 10, Issue 4, pp. e0123935, (2016) (PubMed).

Pérez-Luna, Aguasca, Perearnau, Serratosa, Martínez-Balbas, Jesús Pujol, Bachs: "PCAF regulates the stability of the transcriptional regulator and cyclin-dependent kinase inhibitor p27 Kip1." in: **Nucleic acids research**, Vol. 40, Issue 14, pp. 6520-33, (2012) (PubMed).

Images



Western Blotting

Image 1. RAD54 acetylation is important for BRD9 recognition and HR activity.a-c RAD54 is acetylated by GCN5/PCAF and deacetylated by HDAC 6/HDAC11 following induction of DNA damage. a 293T cells were transfected with control or RAD54-HA plasmid. Twenty-four hours after transfection, cells were exposed to the 10-Gy IR and harvested at the indicated time points. Immunoprecipitation with anti-HA beads was performed. Blots were probed with the indicated antibodies. b 293T cells were transfected with the indicated plasmids. Twenty-four hours after transfection, cells were exposed to 10-Gy IR, and lysates were collected after 8h. Immunoprecipitation with anti-HA beads was performed. Blots were probed with the indicated antibodies. c 293T cells were transfected with

the indicated plasmids, treated as indicated, and subjected to immunoprecipitation as outlined in b. Blots were probed with the indicated antibodies. d, e RAD54 K515 acetylation is important for RAD51-RAD54 complex formation. d 293T cells were transfected with the indicated plasmids, treated as indicated, and subjected to immunoprecipitation as outlined in b. Blots were probed with the indicated antibodies. e 293T cells were transfected with the indicated plasmids, exposed to either no IR or 10-Gy IR as indicated, and subjected to immunoprecipitation as outlined in b. Blots were probed with the indicated antibodies. f-h RAD54 K515 acetylation is essential for HR activity. f, g U2OS cells were transfected with the indicated plasmids and exposed to 2-Gy IR. Cells were fixed after 8h and stained for the indicated proteins. Representative immunofluorescence images of RAD51 (green) and RAD54 (red) are shown in f. Quantification of the indicated foci is shown in g. Representative data (mean±SEM) are shown from n=50 cells examined over three independent experiments. **p<0.01,***p<0.001 by two-sided unpaired t test. NS not significant. Scale bar, 10μm. h Survival curves of U2OS cells expressing the indicated constructs and exposed to the indicated doses of PARPi or cisplatin. Representative data (mean±SEM) are shown from n=3 biologically independent samples. *p<0.05, ***p<0.001 by two-sided unpaired t test. - figure provided by CiteAb. Source: PMID32457312

Western Blotting

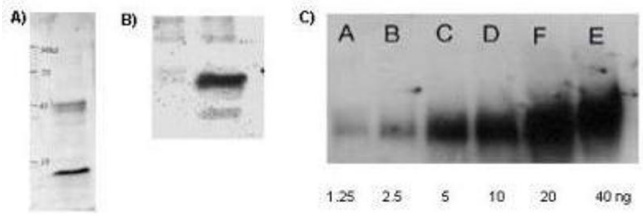
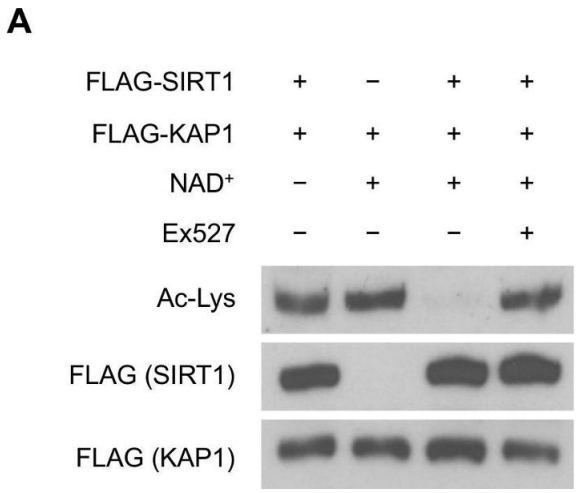


Image 2. Affinity Purified anti-Acetylated Lysine (AcK) antibody is shown to detect acetylated histone in TSA-treated mouse spleen cell lysate (Panel A); control (left lane) and TSA-treated mouse spleen cell lysate (right lane) in panel B; and in acetylated BSA loaded as indicated (panel C).



Western Blotting

Image 3. SIRT1 deacetylates KAP1 in vitro and in vivo.(A) SIRT1 deacetylates KAP1 in vitro. Exogenous FLAG-tagged KAP1 and SIRT1 were purified by anti-FLAG immunoprecipitation. Combination of purified proteins was incubated in deacetylation buffer supplemented with or without NAD+ cofactor. Ex527 (40μM) was added to block the deacetylase activity of SIRT1. (B) SIRT1 deacetylates KAP1 in vivo. FLAG-tagged KAP1 was transfected into control or SIRT1 depleted HEK293T cells. Cells were treated with or without IR 1 hour before harvest. Cell lysates were subjected to immunoprecipitation using anti-FLAG antibody, followed by western blot analysis to assess the total KAP1 acetylation level. Relative density of the overall acetyl lysine was quantified using ImageJ software. Acetylation level was normalized to corresponding FLAG band. (C) HEK293T cells transfected with FLAG-tagged KAP1 were treated with DMSO or Ex527 (20μM) for 6 hours before harvest. Cell lysates were then immunoprecipitated with FLAG-conjugated agarose beads, and the immunoprecipitates were blotted with anti-acetyl lysine antibody to determine the total acetylation level. (D and E) HEK293T cells were transfected with FLAG-tagged KAP1 and treated with DMSO or Ex527 (20μM) for 6 hours before harvest. Recombinant KAP1 was purified and sent for mass spectrometric analysis. Acetyl residues with >2-fold enhancement after inhibitor treatment were considered to be SIRT1 targeted sites. (F) Site-directed mutagenesis was applied to generate 4KR mutant. FLAG-tagged WT-KAP1 or 4KR mutant were transfected into control or SIRT1 depleted HEK293T cells. Total acetylation levels of recombinant WT-KAP1 and 4KR mutant were assessed by immunoblotting. - figure provided by CiteAb. Source: PMID25905708

Please check the product details page for more images. Overall 9 images are available for ABIN5596809.