abcam

Product datasheet

Anti-acetyl Lysine antibody ab80178

9 Abreviews 41 References 6 Images

Overview

Product name	Anti-acetyl Lysine antibody
Description	Rabbit polyclonal to acetyl Lysine
Host species	Rabbit
Tested applications	**Suitable for:** WB, IP, ELISA, ICC/IF, IHC-P
Species reactivity	**Reacts with:** Species independent
Immunogen	Acetylated KLH Conjugates
Positive control	TSA treated mouse spleen cells.
General notes	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. 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

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	Preservative: 0.09% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine)
Purity	Protein A purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee	Our **Abpromise guarantee** covers the use of ab80178 in the following tested applications.

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

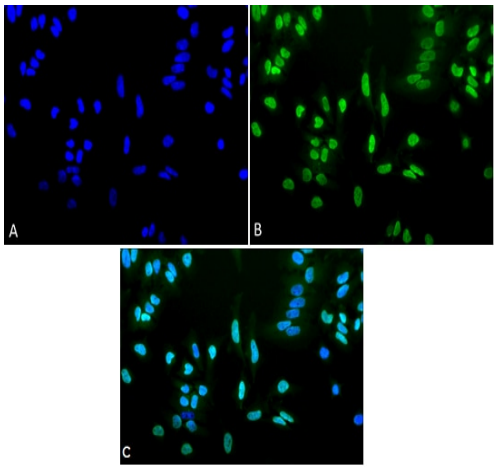
Application	Abreviews	Notes
WB	★★★★☆ (3)	Use at an assay dependent concentration.
IP		Use at an assay dependent concentration.
ELISA		Use at an assay dependent concentration.
ICC/IF	★★★★★ (5)	Use at an assay dependent concentration.
IHC-P	★★★★★ (1)	1/100. (see Abreview)

Target

Relevance

In the nucleus, DNA is tightly packed into nucleosomes generating an environment which is highly repressive towards DNA processes such as transcription. Acetylation of lysine residues within proteins has emerged as an important mechanism used by cells to overcome this repression. The acetylation of non-histone proteins such as transcription factors, as well as histones appears to be involved in this process. Acetylation may result in structural transitions as well as specific signaling within discrete chromatin domains. The role of acetylation in intracellular signaling has been inferred from the binding of acetylated peptides by the conserved bromodomain. Furthermore, recent findings suggest that bromodomain/acetylated-lysine recognition can serve as a regulatory mechanism in protein-protein interactions in numerous cellular processes such as chromatin remodeling and transcriptional activation. The reversible lysine acetylation of histones and non-histone proteins plays a vital role in the regulation of many cellular processes including chromatin dynamics and transcription, gene silencing, cell cycle progression, apoptosis, differentiation, DNA replication, DNA repair, nuclear import, and neuronal repression. More than 20 acetyltransferases and 18 deacetylases have been identified so far, but the mechanistic details of substrate selection and site specificity of these enzymes remain unclear. Over 40 transcription factors and 30 other nuclear, cytoplasmic, bacterial, and viral proteins have been shown to be acetylated in vivo.

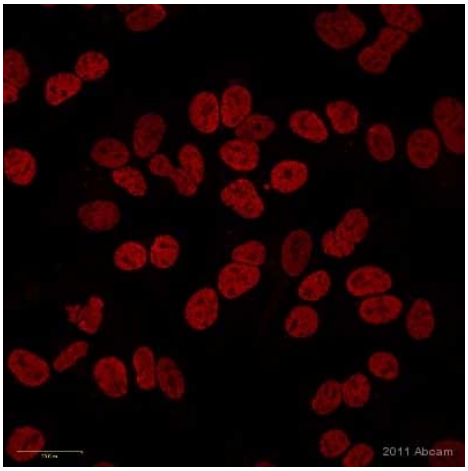
Images



Immunocytochemistry/ Immunofluorescence - Anti-acetyl Lysine antibody (ab80178)

Immunocytochemistry/ Immunofluorescence analysis of Heat Shocked HeLa Cells labeling acetyl Lysine with ab80178 at 1/100 dilution. Cells were fixed with 2% Formaldehyde for 20 min at RT. DAPI (blue) nuclear counter stain at 1/40000 for 2 hours at RT. A FITC conjugated Goat Anti-Rabbit secondary antibody (green) was used at 1/200 dilution. Localization: Nucleus and Cytoplasm.

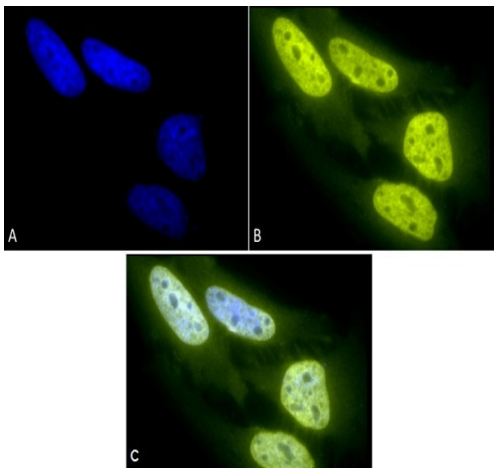
(A) DAPI (blue) nuclear stain. (B) Anti-acetyl Lysine antibody (ab80178) (C) Composite.



Immunocytochemistry/ Immunofluorescence - Anti-acetyl Lysine antibody (ab80178)

Image courtesy of Dr Natasha Snider by Abreview.

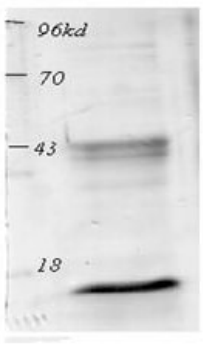
ab80178 staining acetyl Lysine in human HepG2 cells by Immunocytochemistry/ Immunofluorescence. The cells were fixed in methanol and then blocked using 2% serum for 30 minutes at 25°C. Samples were then incubated with primary antibody at 1/150 for 1 hour at 25°C. The secondary antibody used was a goat anti-rabbit IgG conjugated to Alexa Fluor® 594 (red) used at a 1/1000 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-acetyl Lysine antibody (ab80178)

Immunocytochemistry/ Immunofluorescence analysis of Heat Shocked HeLa Cells labeling acetyl Lysine with ab80178 at 1/100 dilution. Cells were fixed with 2% Formaldehyde for 20 min at RT. DAPI (blue) nuclear counter stain at 1/40000 for 2 hours at RT. A R-PE conjugated Goat Anti-Rabbit secondary antibody (yellow) was used at 1/200 dilution. Localization: Nucleus and Cytoplasm.

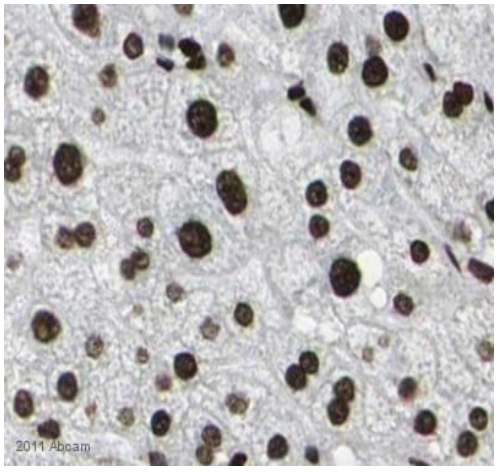
(A) DAPI (blue) nuclear stain. (B) Anti-acetyl Lysine antibody (ab80178) (C) Composite.



Western blot - Anti-acetyl Lysine antibody (ab80178)

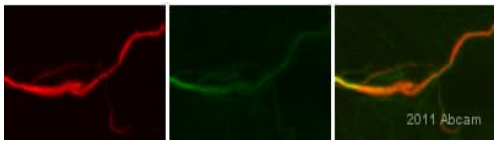
Anti-acetyl Lysine antibody (ab80178) + Cell lysates prepared from TSA treated mouse spleen cells

Western blot analysis of Mouse Spleen lysates showing detection of Acetylated Lysine protein using Primary Antibody: Rabbit Anti-Acetyl Lysine Polyclonal Antibody (ab80178) at 1:1000.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-acetyl Lysine antibody (ab80178)

ab80178 staining acetyl Lysine in human liver tissue by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded tissue sections). The sections were fixed in paraformaldehyde and subjected to heat-mediated antigen retrieval in citric buffer, pH 6.0 prior to blocking with 10% serum for 1 hour at 20°C. The primary antibody was diluted 1/100 and incubated with the sample for 12 hour at 4°C. An HRP-conjugated goat anti-rabbit polyclonal was used as the secondary antibody, diluted 1/200.



Immunocytochemistry/ Immunofluorescence - Anti-acetyl Lysine antibody (ab80178)

Image courtesy of an anonymous Abreview.

ab80178 staining acetyl Lysine (green) in the neuromuscular junction of fruit fly cells by Immunocytochemistry/ Immunofluorescence.
Cells were fixed in formaldehde, permeabilized using 0.4% Triton-X, blocked with 10% NGS for 1 hour at 20°C, then incubated with ab80178 at a 1/200 dilution for 16 hours at 4°C. The secondary used was an Alexa-Fluor 488 conjugated goat anti-rabbit polyclonal, used at a 1/1000 dilution.

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