Histone H3 (AcK14) polyclonal antibody

Catalog: BS67556 Host: Rabbit Reactivity: Human, Zebrafish

BackGround:

The nucleosome, made up of four core histone proteins (H2A, H2B, H3, and H4), is the primary building block of chromatin. Originally thought to function as a static scaffold for DNA packaging, histones have now been shown to be dynamic proteins, undergoing multiple types of post-translational modifications, including acetylation, phosphorylation, methylation, and ubiquitination . Histone acetylation occurs mainly on the amino-terminal tail domains of histones H2A (Lys5), H2B (Lys5, 12, 15, and 20), H3 (Lys9, 14, 18, 23, 27, 36, and 56), and H4 (Lys5, 8, 12, and 16) and is important for the regulation of histone deposition, transcriptional activation, DNA replication, recombination, and DNA repair . Hyper-acetylation of the histone tails neutralizes the positive charge of these domains and is believed to weaken histone-DNA and nucleosome-nucleosome interactions, thereby destabilizing chromatin structure and increasing the accessibility of DNA to various DNA-binding proteins . In addition, acetylation of specific lysine residues creates docking sites for a protein module called the bromodomain, which binds to acetylated lysine residues . Many transcription and chromatin regulatory proteins contain bromodomains and may be recruited to gene promoters, in part, through binding of acetylated histone tails. Histone acetylation is mediated by histone acetyltransferases (HATs), such as CBP/p300, GCN5L2, PCAF, and Tip60, which are recruited to genes by DNA-bound protein factors to facilitate transcriptional activation. Deacetylation, which is mediated by histone deacetylases (HDAC and sirtuin proteins), reverses the effects of acetylation and generally facilitates transcriptional repression .

Product:

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.

Molecular Weight:

~ 15 kDa

Swiss-Prot:

P68431; Q71DI3; P84243

Purification&Purity:

The antibody was purified by immunogen affinity chromatography.

Applications:

WB (1/500 - 1/1000), IF/ICC (1/50 - 1/200)

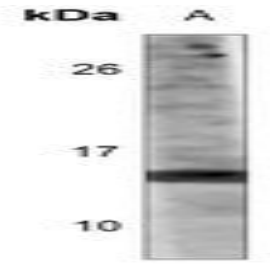
Storage&Stability:

Store at 4℃ short term. Aliquot and store at -20℃ long term. Avoid freeze-thaw cycles.

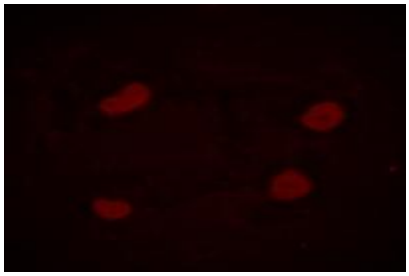
Specificity:

Recognizes endogenous levels of Histone H3 with an acetylation site at K14 protein.

DATA:



Western blot analysis of Histone H3 (AcK14) expression in zebrafish (A) whole cell lysates.



Immunofluorescent analysis of Histone H3 (AcK14) staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 ℃ in a hidified chamber.

Bioworld Technology, Inc.
Add: 1660 South Highway 100, Suite 500 St. Louis Park, MN 55416,USA.
Email: info@bioworlde.com
Tel: 6123263284
Fax: 6122933841

Bioworld technology, co. Ltd.
Add: No 9, weidi road Qixia District Nanjing, 210046, P. R. China.
Email: info@biogot.com
Tel: 0086-025-68037686
Fax: 0086-025-68035151

Cells were washed with PBST and incubated with a AF594-conjugated secondary antibody (red) in PBS at room temperature in the dark.

Note:

For research use only, not for use in diagnostic procedure.

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Email: info@biogot.com
Tel: 0086-025-68037686
Fax: 0086-025-68035151