SANTA CRUZ BIOTECHNOLOGY, INC.

Ac-Histone H4 (Lys 8): sc-34267

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

In eukaryotes, DNA is wrapped around histone octamers to form the basic unit of chromatin structure. The octamer is composed of Histones H2A, H2B, H3 and H4, and it associates with approximately 200 base pairs of DNA to form the nucleosome. The association of DNA with histones results in dense packing of chromatin, which restricts proteins involved in gene transcription from binding to DNA. p300 preferentially acetylates Histone H3 at Lysines 14 and 18 and Histone H4 at Lysines 5 and 8. PCAF in its native form primarily acetylates Histone H3 at Lysine 14 to a monoacetylated form and less efficiently acetylates Histone H4 at Lysine 8. Histone H4 may also be acetylated at Lysines 12 and 16, and the involvement of acetylated H4 with Histones H2A, H2B and H3 suggests that acetylated histones may be involved in dynamic chromatin remodeling.

REFERENCES

1. Doenecke, D., et al. 1988. The H1 and core histone subtypes: differential gene expression and varied primary structures. Adv. Enzyme Regul. 27: 107-120.
2. Lewin, B. 1990. GENES IV. Oxford: Oxford University Press, 411-412.

SOURCE

Ac-Histone H4 (Lys 8) is a rabbit polyclonal antibody raised against a short peptide containing acetylated Lysine 8 of Histone H4 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-34267 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Ac-Histone H4 (Lys 8) is recommended for detection of Lysine 8 acetylated Histone H4 of broad species origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with non-acetylated Histone H4 or other lysine acetylation sites.

Molecular Weight of acetylated Ac-Histone H4: 11 kDa.

Molecular Weight of non-acetylated Ac-Histone H4: 11 kDa.

Molecular Weight of hyper-acetylated Ac-Histone H4: 35 kDa.

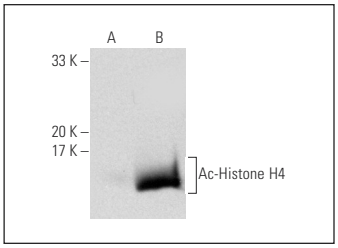
Positive Controls: SK-N-MC nuclear extract: sc-2154, HeLa nuclear extract: sc-2120 or IMR-32 nuclear extract: sc-2148.

Santa Cruz Biotechnology offers several chemical inducers of acetylation, including: Apicidin (sc-202061), Panobinostat (sc-208148), Suberoylanilide Hydroxamic Acid (sc-220139), Oxamflatin (sc-205960), Ms-275 (sc-279455), M 344 (sc-203124), Scriptaid (sc-202807), Trapoxin A (sc-253730) and Trichostatin A (sc-3511).

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Western blot analysis of Ac-Histone H4 acetylation in untreated (**A**) and Trichostatin A (sc-3511) treated (**B**) NIH/3T3 whole cell lysates. Antibodies tested include Ac-Histone H4 (Lys 8): sc-34267 (**A**,**B**). Note acetylation of Ac-Histone H4 in lane **B**.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.