Histone H3K4ac Antibody, SNAP-ChIP® Certified

Catalog No 13-0034
Lot No 20336002-42
Pack Size 100 µg

Type Monoclonal **Host** Rabbit **Target Size** 15 kDa **Format** Aff. Pur. IgG

Reactivity Human, Mouse, Wide Range **Applications** ChIP, WB, ICC, Luminex

Product Description:

This antibody meets EpiCypher's "SNAP-ChIP® Certified" criteria for specificity and efficient target enrichment in a ChIP experiment (<20% cross-reactivity across the panel, >5% recovery of target input) based on technology originating from Grzybowski et al. [1] and profiling standards from Shah et al. [2]. This antibody reacts to H3K4ac alone and within a tetraacetyl nucleosome (H3K4,9,14,18ac) with no cross reactivity to other lysine acylations in the EpiCypher SNAP-ChIP K-AcylStat panel (EpiCypher 19-3001) detected.

Immunogen:

Synthetic peptide corresponding to histone H3 acetylated at lysine 4.

Formulation:

Protein A affinity-purified recombinant monoclonal antibody (1 mg/mL) in PBS, with 0.09% sodium azide, 1% BSA, and 50% glycerol.

Storage and Stability:

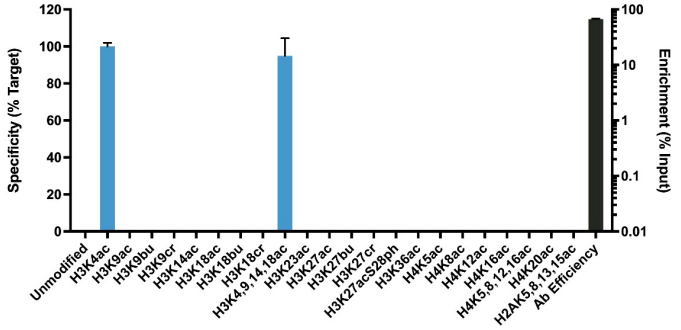
Stable for 1 year at -20°C from date of receipt.

Recommended Dilution:

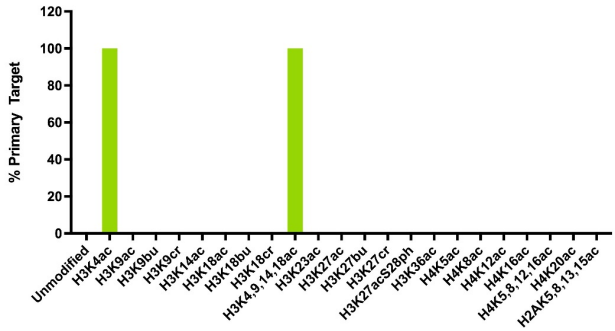
ChIP: 2 - 5 µg per 10^6 cells **WB:** 0.25 - 1 µg/mL
ICC: 0.5 - 2 µg/mL **Luminex:** 0.25 - 4 µg/mL

References:

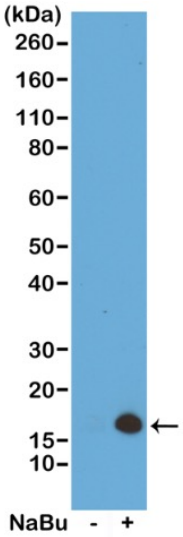
[1] Grzybowski *et al* (2015) *Mol Cell* 58:886
[2] Shah *et al* (2018) *Mol Cell* 72:162



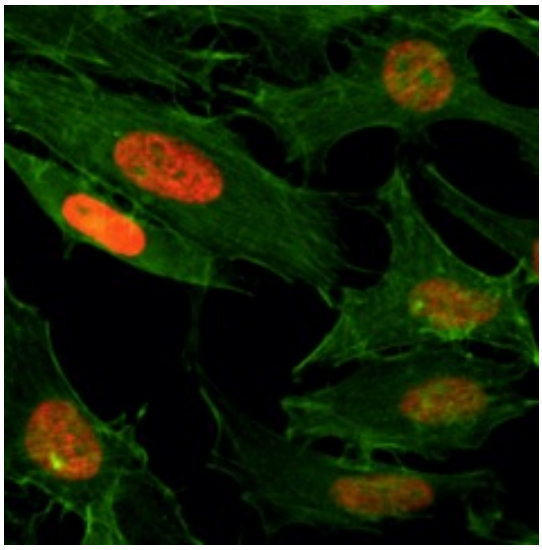
SNAP-ChIP-qPCR: Histone H3K4ac antibody (3 µg) was tested in a native ChIP experiment using chromatin from K-562 cells (3 µg) with the SNAP-ChIP K-AcylStat Panel (EpiCypher 19-3001) spiked-in prior to micrococcal nuclease digestion. Specificity (left y-axis) was determined by qPCR for the DNA barcodes corresponding to modified nucleosomes in the SNAP-ChIP panel (x-axis). Black bar represents antibody efficiency (right y-axis; log scale) and indicates percentage of the target immunoprecipitated relative to input.



Luminex Data: Histone H3K4ac antibody was assessed using a Luminex® based approach employing dCypher™ Nucleosome K-AcylStat Panel (EpiCypher 16-9003). The panel comprises biotinylated designer nucleosomes (x-axis) individually coupled to uniquely identifiable Luminex MagPlex® beads. Antibody binding to nucleosomes was tested in multiplex (24-plex) at a 1:1,000 dilution, and detected with an anti-IgG*PE secondary. Data was generated using a Luminex FlexMAP3D® and is shown normalized to on-target signal (H3K4ac; set to 100).



Western Blot Data: Western blot of acid extracts from HeLa cells untreated (-) or treated with sodium butyrate (+), using H3K4ac antibody at 0.5 µg/mL.



Immunocytochemistry Data: Immunocytochemistry of HeLa cells treated with sodium butyrate, using H3K4ac antibody (red). Actin filaments have been labeled with fluorescein phalloidin (green).