SANTA CRUZ BIOTECHNOLOGY, INC.

# pan-Acetyl (C2): sc-8649

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

In the intact cell, DNA is closely associated with histones and other nuclear proteins to form chromatin. The remodeling of chromatin is believed to be a critical component of transcriptional regulation, and a major source of this remodeling is brought about by the acetylation of nucleosomal histones. Acetylation of lysine residues in the amino-terminal tail domain of histone results in an allosteric change in the nucleosomal conformation, and an increased accessiblity of DNA to transcription factors. Conversely, the deacetylation of histones is associated with transcriptional silencing. Many non-histone proteins are also regulated by acetylation, including p53, growth hormone and tubulin. Pan-Acetyl antibodies are provided for the detection of a range of acetylated proteins.

## SOURCE

pan-Acetyl (C2) is available as either goat (sc-8649) or rabbit (sc-8649-R) polyclonal affinity purified antibody raised against an acetylated peptide.

## PRODUCT

Each vial contains either 100 µg (sc-8649) or 200 µg (sc-8649-R) IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8649 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as fluorescein (sc-8649 FITC) or rhodamine (sc-8649 TRITC) conjugates for immunofluorescence, 200 µg/1 ml.

Available as TransCruz reagent for ChIP application, sc-8649 X, 200 µg/0.1 ml.

## APPLICATIONS

pan-Acetyl (C2) is recommended for detection of pan-Acetyl of broad species origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

pan-Acetyl (C2) is also recommended for detection of pan-Acetyl in additional species, including equine, canine, bovine, porcine and avian.

pan-Acetyl (C2) X TransCruz antibody is recommended for ChIP assays.

Positive Controls: HeLa nuclear extract: sc-2120, HeLa + sodium butyrate cell lysate: sc-24696 or NIH/3T3 whole cell lysate: sc-2210.

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).

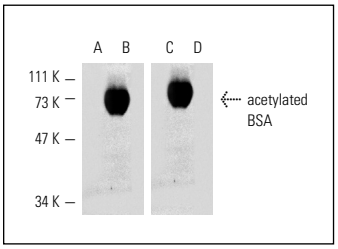
## STORAGE

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

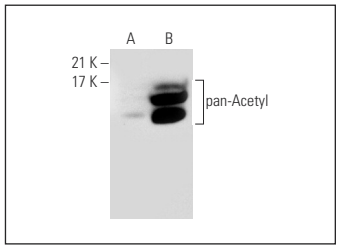
## RESEARCH USE

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

## DATA




Western blot analysis of control BSA (**A**,**C**) and acetylated BSA (**B**,**D**). Blots are probed with pan-Acetyl (C2): sc-8649 (**A**,**B**) and pan-Acetyl (C4): sc-8663 (**C**,**D**).




pan-Acetyl (C2)-R: sc-8649-R. Western blot analysis of pan-Acetyl acetylation in untreated (**A**) and Trichostatin A (sc-3511) treated (**B**) NIH/3T3 whole cell lysates. Note upregulation of pan-Acetyl acetylation in lane **B**.

## SELECT PRODUCT CITATIONS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3. Barbetti, V., et al. 2007. Selective anti-leukaemic activity of low-dose histone deacetylase inhibitor ITF2357 on AML1/ETO-positive cells. Oncogene 27: 1767-1778.
4. Duan, J., et al. 2007. Nuclear factor-κB p65 small interfering RNA or proteasome inhibitor bortezomib sensitizes head and neck squamous cell carcinomas to classic histone deacetylase inhibitors and novel histone deacetylase inhibitor PXD101. Mol. Cancer Ther. 6: 37-50.
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10. Liu, Y., et al. 2012. Modulation of histone deacetylase 6 (HDAC6) nuclear import and tubulin deacetylase activity through acetylation. J. Biol. Chem. 287: 29168-29174.