SANTA CRUZ BIOTECHNOLOGY, INC.

# GCN5 (H-75): sc-20698

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

In the intact cell, DNA closely associates 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 accessibility to transcription factors by DNA. Conversely, the deacetylation of histones is associated with transcriptional silencing. Several mammalian proteins have been identified as nuclear histone acetylases, including GCN5, PCAF (for p300/CBP-associated factor), p300/CBP and the TFIID subunit TAF II p250. Mammalian HDAC1 (also designated HD1) and HDAC2 (also designated mammalian RPD3), both of which are related to the yeast transcriptional regulator Rpd3p, have been identified as histone deacetylases.

## CHROMOSOMAL LOCATION

Genetic locus: GCN5L2 (human) mapping to 17q21.2; Gcn5l2 (mouse) mapping to 11 D.

## SOURCE

GCN5 (H-75) is a rabbit polyclonal antibody raised against amino acids 376-450 of GCN5 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. Also available as TransCruz reagent for ChIP application, sc-20698 X, 200 µg/0.1 ml.

GCN5 (H-75) is available conjugated to agarose (sc-20698 AC), 500 µg/0.25 ml agarose in 1 ml, for IP.

## APPLICATIONS

GCN5 (H-75) is recommended for detection of GCN5 of mouse, rat and human 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); non cross-reactive with PCAF.

GCN5 (H-75) is also recommended for detection of GCN5 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for GCN5 siRNA (h): sc-37946, GCN5 siRNA (m): sc-37947, GCN5 shRNA Plasmid (h): sc-37946-SH, GCN5 shRNA Plasmid (m): sc-37947-SH, GCN5 shRNA (h) Lentiviral Particles: sc-37946-V and GCN5 shRNA (m) Lentiviral Particles: sc-37947-V.

GCN5 (H-75) X TransCruz antibody is recommended for ChIP assays.

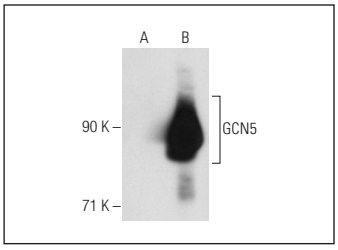
Molecular Weight of GCN5: 90 kDa.

Positive Controls: GCN5 (h): 293T Lysate: sc-115311, K-562 whole cell lysate: sc-2203 or HeLa whole cell lysate: sc-2200.

## STORAGE

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

## DATA




GCN5 (H-75): sc-20698. Western blot analysis of GCN5 expression in non-transfected: sc-117752 (**A**) and human GCN5 transfected: sc-115311 (**B**) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS


1. Gui, C.Y., et al. 2004. Histone deacetylase (HDAC) inhibitor activation of p21WAF1 involves changes in promoter-associated proteins, including HDAC1. Proc. Natl. Acad. Sci. USA 101: 1241-1246.
2. An, W., et al. 2004. Ordered cooperative functions of PRMT1, p300, and CARM1 in transcriptional activation by p53. Cell 117: 735-748.
3. Mao, X., et al. 2009. GCN5 is a required cofactor for a ubiquitin ligase that targets NFκB/RelA. Genes Dev. 23: 849-861.
4. Krämer, O.H. and Heinzel, T. 2010. Phosphorylation-acetylation switch in the regulation of STAT1 signaling. Mol. Cell. Endocrinol. 315: 40-48.
5. Xiong, S., et al. 2010. PGC-1 α serine 570 phosphorylation and GCN5-mediated acetylation by angiotensin II drive catalase down-regulation and vascular hypertrophy. J. Biol. Chem. 285: 2474-2487.
6. Woo, A.J., et al. 2011. Role of ZBP-89 in human globin gene regulation and erythroid differentiation. Blood 118: 3684-3693.
7. Vernimmen, D., et al. 2011. Polycomb eviction as a new distant enhancer function. Genes Dev. 25: 1583-1588.
8. Wan, Y., et al. 2012. All-*trans* retinoic acid induces chromatin remodeling at the promoter of the mouse liver, bone, and kidney alkaline phosphatase gene in C3H10T 1/2 cells. Biochem. Genet. 50: 495-507.


## RESEARCH USE

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