SANTA CRUZ BIOTECHNOLOGY, INC.

GCN5 (A-11): sc-365321

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.

REFERENCES

1. Lee, D.Y., et al. 1993. A positive role for histone acetylation in transcription factor access to nucleosomal DNA. Cell 72: 73-82.
2. Braunstein, M., et al. 1993. Transcriptional silencing in yeast is associated with reduced nucleosome acetylation. Genes Dev. 7: 592-604.

CHROMOSOMAL LOCATION

Genetic locus: KAT2A (human) mapping to 17q21.2; Kat2a (mouse) mapping to 11 D.

SOURCE

GCN5 (A-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 363-387 at the N-terminus of GCN5 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for ChIP application, sc-365321 X, 200 µg/0.1 ml.

GCN5 (A-11) is available conjugated to agarose (sc-365321 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365321 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365321 PE), fluorescein (sc-365321 FITC), Alexa Fluor® 488 (sc-365321 AF488), Alexa Fluor® 546 (sc-365321 AF546), Alexa Fluor® 594 (sc-365321 AF594) or Alexa Fluor® 647 (sc-365321 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365321 AF680) or Alexa Fluor® 790 (sc-365321 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365321 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

GCN5 (A-11) is recommended for detection of GCN5 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GCN5 (A-11) is also recommended for detection of GCN5 in additional species, including canine and porcine.

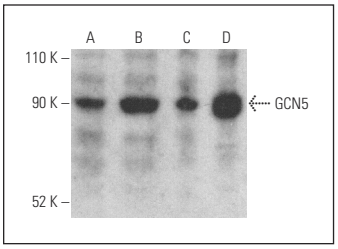
Suitable for use as control antibody for GCN5 siRNA (h): sc-37946, GCN5 siRNA (m): sc-37947, GCN5 shRNA Plasmid (h): sc-37946-SH, GCN5 shRNA Plasmid (m): sc-37947-SH, GCN5 shRNA (h) Lentiviral Particles: sc-37946-V and GCN5 shRNA (m) Lentiviral Particles: sc-37947-V.

GCN5 (A-11) X TransCruz antibody is recommended for ChIP assays.

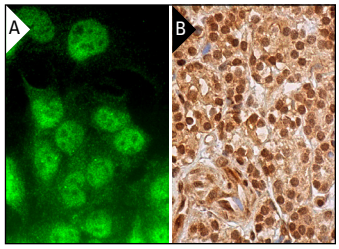
Molecular Weight of GCN5: 90 kDa.

Positive Controls: Hep G2 nuclear extract: sc-364819, CCRF-CEM cell lysate: sc-2225 or NIH/3T3 whole cell lysate: sc-2210.

DATA



GCN5 (A-11) HRP: sc-365321 HRP. Direct western blot analysis of GCN5 expression in K-562 nuclear extract (**A**) and CCRF-CEM (**B**), Daudi (**C**) and NIH/3T3 (**D**) whole cell lysates.



GCN5 (A-11): sc-365321. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human parathyroid gland tissue showing nuclear and cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Park, D.R., et al. 2014. The effect of SIRT1 protein knock down on PGC-1α acetylation during skeletal muscle contraction. J. Exerc. Nutrition Biochem. 18: 1-7.
2. Zhou, Y., et al. 2020. WDHD1 facilitates G_1 checkpoint abrogation in HPV E7 expressing cells by modulating GCN5. BMC Cancer 20: 840.
3. Huot, M., et al. 2021. Repurposing proscillaridin A in combination with decitabine against embryonal rhabdomyosarcoma RD cells. Cancer Chemother. Pharmacol. 88: 845-856.
4. Bray, D., et al. 2022. CASCADE: high-throughput characterization of regulatory complex binding altered by non-coding variants. Cell Genom. 2: 100098.

RESEARCH USE

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