SANTA CRUZ BIOTECHNOLOGY, INC.

GATAD2A (G-9): sc-514987

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

GATAD2A (GATA zinc finger domain containing 2A), also known as p66α, is a ubiquitously expressed, highly conserved protein that is essential for development. GATAD2A contains a GATA-type zinc finger and is a component of the NuRD (nucleosome remodeling and histone deacetylation) complex along with MBD2, HDAC1 and HDAC2. The NuRD complex is associated with ATP-dependent chromatin-remodeling and histone deacetylase activity. GATAD2A interacts with MBD2 and MBD3 and colocalizes with MBD2 in nuclear speckles. This interaction enhances repression mediated by MBD2 and allows for the interaction with histone tails. GATAD2A contains two domains involved in transcriptional repression. For functional repressor activity, GATAD2A requires SUMOylation at Lys-30 and Lys-487.

REFERENCES

1. Brackertz, M., et al. 2002. Two highly related p66 proteins comprise a new family of potent transcriptional repressors interacting with MBD2 and MBD3. J. Biol. Chem. 277: 40958-40966.
2. Gururaja, T., et al. 2003. Use of MEDUSA-based data analysis and capillary HPLC-ion-trap mass spectrometry to examine complex immunoaffinity extracts of RBAp48. J. Proteome Res. 1: 253-261.
3. Jin, S.G., et al. 2005. MBD3L2 interacts with MBD3 and components of the NuRD complex and can oppose MBD2-MeCP1-mediated methylation silencing. J. Biol. Chem. 280: 12700-12709.
4. Kon, C., et al. 2005. Developmental roles of the Mi-2/NURD-associated protein p66 in *Drosophila*. Genetics 169: 2087-2100.
5. Gong, Z., et al. 2006. SUMO modification enhances p66-mediated transcriptional repression of the Mi-2/NuRD complex. Mol. Cell. Biol. 26: 4519-4528.

CHROMOSOMAL LOCATION

Genetic locus: GATAD2A (human) mapping to 19p13.11; Gatad2a (mouse) mapping to 8 B3.3.

SOURCE

GATAD2A (G-9) is a mouse monoclonal antibody raised against amino acids 186-275 mapping within an internal region of GATAD2A 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.

GATAD2A (G-9) is available conjugated to agarose (sc-514987 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514987 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514987 PE), fluorescein (sc-514987 FITC), Alexa Fluor® 488 (sc-514987 AF488), Alexa Fluor® 546 (sc-514987 AF546), Alexa Fluor® 594 (sc-514987 AF594) or Alexa Fluor® 647 (sc-514987 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514987 AF680) or Alexa Fluor® 790 (sc-514987 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

GATAD2A (G-9) is recommended for detection of GATAD2A 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GATAD2A siRNA (h): sc-97791, GATAD2A siRNA (m): sc-145342, GATAD2A shRNA Plasmid (h): sc-97791-SH, GATAD2A shRNA Plasmid (m): sc-145342-SH, GATAD2A shRNA (h) Lentiviral Particles: sc-97791-V and GATAD2A shRNA (m) Lentiviral Particles: sc-145342-V.

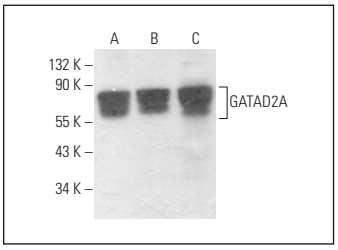
Molecular Weight of GATAD2A: 68 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

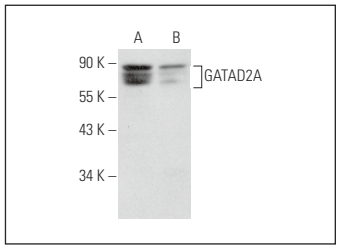
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



GATAD2A (G-9): sc-514987. Western blot analysis of GATAD2A expression in HeLa (**A**), MCF7 (**B**) and NIH/3T3 (**C**) whole cell lysates.



GATAD2A (G-9): sc-514987. Western blot analysis of GATAD2A expression in Jurkat (**A**) and HeLa (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Shen, J.Z., et al. 2021. FBXO44 promotes DNA replication-coupled repetitive element silencing in cancer cells. Cell 184: 352-369.e23.

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.