

GATAD2A (h): 293 Lysate: sc-113052

BACKGROUND

GATAD2A (GATA zinc finger domain containing 2A), also known as p66 α , 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., Boeke, J., Zhang, R. and Renkawitz, R. 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., Li, W., Bernstein, J., Payan, D.G. and Anderson, D.C. 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., Jiang, C.L., Rauch, T., Li, H. and Pfeifer, G.P. 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., Cadigan, K.M., da Silva, S.L. and Nusse, R. 2005. Developmental roles of the Mi-2/NURD-associated protein p66 in *Drosophila*. *Genetics* 169: 2087-2100.
5. Gong, Z., Brackertz, M. and Renkawitz, R. 2006. SUMO modification enhances p66-mediated transcriptional repression of the Mi-2/NuRD complex. *Mol. Cell. Biol.* 26: 4519-4528.
6. Brackertz, M., Gong, Z., Leers, J. and Renkawitz, R. 2006. p66 α and p66 β of the Mi-2/NuRD complex mediate MBD2 and histone interaction. *Nucleic Acids Res.* 34: 397-406.
7. Marino, S. and Nusse, R. 2007. Mutants in the mouse NuRD/Mi2 component P66 α are embryonic lethal. *PLoS ONE* 2: e519.

CHROMOSOMAL LOCATION

Genetic locus: GATAD2A (human) mapping to 19p13.11.

PRODUCT

GATAD2A (h): 293 Lysate represents a lysate of human GATAD2A transfected 293 cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

GATAD2A (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive GATAD2A antibodies. Recommended use: 10-20 μ l per lane.

Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.