

GATAD2A (p66aF11A7): sc-81110

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.

SOURCE

GATAD2A (p66aF11A7) is a mouse monoclonal antibody raised against a recombinant protein corresponding to an internal region of GATAD2A of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

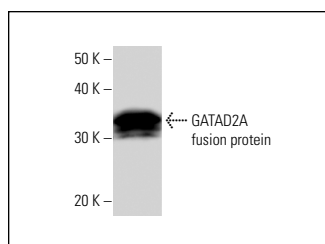
APPLICATIONS

GATAD2A (p66aF11A7) is recommended for detection of GATAD2A of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

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

Molecular Weight of GATAD2A: 68 kDa.

DATA



GATAD2A (p66aF11A7): sc-81110. Western Blot analysis of human recombinant GATAD2A fusion protein.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

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.