

ZAC1 (m): 293 Lysate: sc-179767

BACKGROUND

Pleiomorphic adenoma gene (PLAG1) encodes a zinc finger protein and is the target gene for pleiomorphic adenomas of the salivary gland. The PLAG family of zinc finger proteins include PLAG1, ZAC1 and PLAG-like 2 (PLAGL2). ZAC1, also known as PLAGL1, concomitantly controls apoptosis and cell cycle arrest through separate pathways. ZAC1 also acts as a positive or negative transcriptional cofactor for nuclear receptors, depending on the expression of functional p53. ZAC1 is broadly expressed in embryo, with highest expression in the liver primordium, the umbilical region and the neural tube. PLAGL1 is also expressed in normal mammary gland. PLAGL2 functions as a positive regulator of transcription and localizes to the nucleus. PLAGL2 and ZAC1 bind to the DNA consensus sequence ACGGGGGCCCTTTA. PLAGL2 is ubiquitously expressed with particular abundance in spleen, lung and testis where it may be involved in cell cycle arrest and apoptosis of tumor cells.

REFERENCES

1. Kas, K., et al. 1997. Promoter swapping between the genes for a novel zinc finger protein and β -catenin in pleiomorphic adenomas with t(3;8) (p21;q12) translocations. *Nat. Genet.* 15: 170-174.
2. Kas, K., et al. 1998. Transcriptional activation capacity of the novel PLAG family of zinc finger proteins. *J. Biol. Chem.* 273: 23026-23032.
3. Bilanges, B., et al. 1999. Loss of expression of the candidate tumor suppressor gene ZAC in breast cancer cell lines and primary tumors. *Oncogene* 18: 3979-3988.
4. Piras, G., et al. 2000. ZAC1 (Lot1), a potential tumor suppressor gene, and the gene for ϵ -sarcoglycan are maternally imprinted genes: identification by a subtractive screen of novel uniparental fibroblast lines. *Mol. Cell. Biol.* 9: 3308-3315.
5. Huang, S.M., et al. 2001. Enhancement of p53-dependent gene activation by the transcriptional coactivator ZAC1. *Oncogene* 17: 2134-2143.
6. Furukawa, T., et al. 2001. Involvement of PLAGL2 in activation of iron deficient- and hypoxia-induced gene expression in mouse cell lines. *Oncogene* 20: 4718-4727.

CHROMOSOMAL LOCATION

Genetic locus: Plagl1 (mouse) mapping to 10 A2.

PRODUCT

ZAC1 (m): 293 Lysate represents a lysate of mouse ZAC1 transfected 293 cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

ZAC1 (m): 293 Lysate is suitable as a Western Blotting positive control for mouse reactive ZAC1 antibodies. Recommended use: 10-20 μ l per lane.

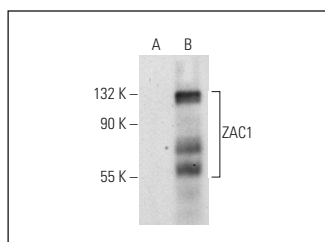
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

ZAC1 (C-7): sc-166944 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse ZAC1 expression in ZAC1 transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

DATA



ZAC1 (C-7): sc-166944. Western blot analysis of ZAC1 expression in non-transfected: sc-110760 (A) and mouse ZAC1 transfected: sc-179767 (B) 293 whole cell lysates.

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.

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.