

ZAC1 (F-9): sc-377105

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 ACGGGGGCCCTTA. 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.

CHROMOSOMAL LOCATION

Genetic locus: PLAGL1 (human) mapping to 6q24.2.

SOURCE

ZAC1 (F-9) is a mouse monoclonal antibody raised against amino acids 211-463 of ZAC1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-377105 X, 200 μ g/0.1 ml.

ZAC1 (F-9) is available conjugated to agarose (sc-377105 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377105 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377105 PE), fluorescein (sc-377105 FITC), Alexa Fluor[®] 488 (sc-377105 AF488), Alexa Fluor[®] 546 (sc-377105 AF546), Alexa Fluor[®] 594 (sc-377105 AF594) or Alexa Fluor[®] 647 (sc-377105 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-377105 AF680) or Alexa Fluor[®] 790 (sc-377105 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

ZAC1 (F-9) is recommended for detection of ZAC1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 ZAC1 siRNA (h): sc-38183, ZAC1 shRNA Plasmid (h): sc-38183-SH and ZAC1 shRNA (h) Lentiviral Particles: sc-38183-V.

ZAC1 (F-9) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of human ZAC1: 51 kDa.

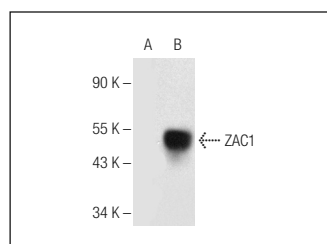
Molecular Weight (predicted) of mouse ZAC1: 79 kDa.

Positive Controls: human ZAC1 transfected whole cell lysate.

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



ZAC1 (F-9): sc-377105. Western blot analysis of ZAC1 expression in non-transfected (A) and human ZAC1 transfected (B) whole cell lysates.

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.