SANTA CRUZ BIOTECHNOLOGY, INC.

MafA (F-12): sc-27140

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Members of the bZIP containing Maf transcription factor family play important roles in cellular differentiation and regulation. MafA, originally identified in mammals as the pancreatic β-cell specific RIPE3b1 factor, is a transcriptional activator expressed specifically in Insulin-producing cells, where it functions by binding to the critical Insulin enhancer element RIPE3b. MafA is critical for generating and regulating glucose-reponsive Insulin expression in β cells. The size of MafA in mammalian cell lines varies, due to posttranslational modification of the protein.

REFERENCES

1. Kerppola, T.K., et al. 1994. A conserved region adjacent to the basic domain is required for recognition of an extended DNA binding site by Maf/Nrl family proteins. Oncogene 11: 3149-3158.
2. Kataoka, K., et al. 2002. MafA is a glucose-regulated and pancreatic β cell-specific transcriptional activator for the Insulin gene. J. Biol. Chem. 277: 49903-49910.
3. Olbrot, M., et al. 2002. Identification of β cell-specific Insulin gene transcription factor RIPE3b1 as mammalian MafA. Proc. Natl. Acad. Sci. USA 10: 6737-6742.
4. Samaras, S.E., et al. 2003. The islet β cell-enriched RIPE3b1/Maf transcription factor regulates PDX-1 expression. J. Biol. Chem. 278: 12263-12270.
5. Nishizawa, M., et al. 2003. MafA has strong cell transforming ability but is a weak transactivator. Oncogene 22: 7882-7890.
6. Matsuoka, T.A., et al. 2004. The MafA transcription factor appears to be responsible for tissue-specific expression of Insulin. Proc. Natl. Acad. Sci. USA 101: 2930-2933.

CHROMOSOMAL LOCATION

Genetic locus: MAFA (human) mapping to 8q24.3; Mafa (mouse) mapping to 15 D3.

SOURCE

MafA (F-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of MafA of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-27140 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-27140 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

MafA (F-12) is recommended for detection of MafA of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (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 MafA siRNA (h): sc-43905, MafA siRNA (m): sc-149215, MafA shRNA Plasmid (h): sc-43905-SH, MafA shRNA Plasmid (m): sc-149215-SH, MafA shRNA (h) Lentiviral Particles: sc-43905-V and MafA shRNA (m) Lentiviral Particles: sc-149215-V.

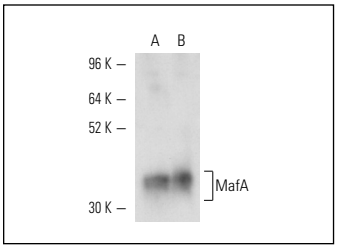
MafA (F-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of MafA monomer: 18 kDa.

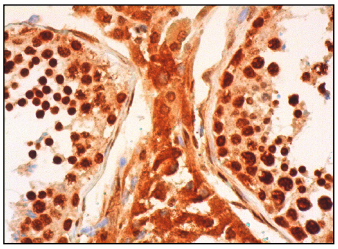
Molecular Weight of MafA glycoprotein: 28-40 kDa.

Positive Controls: mouse eye extract: sc-364241 or mouse pancreas extract: sc-364244.

DATA



MafA (F-12): sc-27140. Western blot analysis of MafA expression in mouse eye (**A**) and mouse pancreas (**B**) tissue extracts.



MafA (F-12): sc-27140. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear staining of cells in seminiferous ducts and nuclear and cytoplasmic staining of Leydig cells.

PROTOCOLS

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