

# MafA (H-12): sc-27139

## 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  $\beta$ -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-responsive Insulin expression in  $\beta$  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  $\beta$  cell-specific transcriptional activator for the Insulin gene. *J. Biol. Chem.* 277: 49903-49910.
3. Olbrot, M., et al. 2002. Identification of  $\beta$  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  $\beta$  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.

## SOURCE

MafA (H-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MafA of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g 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-27139 X, 200  $\mu$ g/0.1 ml.

Blocking peptide available for competition studies, sc-27139 P, (100  $\mu$ g 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

MafA (H-12) is recommended for detection of MafA of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 MafA siRNA (h): sc-43905, MafA shRNA Plasmid (h): sc-43905-SH and MafA shRNA (h) Lentiviral Particles: sc-43905-V.

MafA (H-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.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

1. Southwood, C.M., et al. 2012. Tissue-restricted transcription from a conserved intragenic CpG island in the Klf1 gene in mice. *Biol. Reprod.* 87: 108.

## RESEARCH USE

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



Try **MafA (F-6): sc-390491**, our highly recommended monoclonal alternative to MafA (H-12).