SANTA CRUZ BIOTECHNOLOGY, INC.

MafF/G/K (C-18): sc-16278

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Members of the Maf family of basic region/leucine zipper (bZIP) transcription factors affect transcription in either a positive or negative fashion, depending on their particular protein partner and the context of the target promoter. c-Maf (Maf-2) and the closely related family members Neural retina leucine zipper (Nrl), L-Maf, and Krml1/MafB (Maf-1) all bind to T-MARE sites and are implicated in a wide variety of developmental and physiologic roles. The three small Maf family proteins MafF, MafG, and MafK are components of NF-E2 which function as heterodimers with the large tissue-restricted subunit of NF-E2 called p45, and furthermore are implicated in the transcriptional regulation of many erythroid-specific genes. MafG is ubiquitously expressed, with highest expression in the VMS, heart and skeletal muscle; its expression is induced in response to stress. MafK, also designated NF-E2 p18, is primarily expressed during development in mesenchymal and hematopoietic cells and neurons. MafK heterodimerizes with NF-E2 and various CNC proteins. MafF is most abundantly expressed in the lung and is thought to compensate for loss of function mutations in MafG and MafK.

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 9: 3149-3158.
2. Igarashi, K., et al. 1995. Conditional expression of the ubiquitous transcription factor MafK induces erythroleukemia cell differentiation. Proc. Natl. Acad. Sci. USA 92: 7445-7449.
3. Johnsen, O., et al. 1996. Small Maf proteins interact with the human transcription factor TCF11/Nrf1/LCR-F1. Nucleic Acids Res. 24: 4289-4297.
4. Ring, B.Z., et al. 2000. Regulation of mouse lens fiber cell development and differentiation by the Maf gene. Development 127: 307-317.

SOURCE

MafF/G/K (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of MafG of chicken 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-16278 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-16278 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

MafF/G/K (C-18) is recommended for detection of MafF, MafG and NF-E2 p18 (also designated MafK) of mouse, rat, human and chicken 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).

MafF/G/K (C-18) is also recommended for detection of MafF, MafG and NF-E2 p18 (also designated MafK) in additional species, including equine, canine, bovine and avian.

MafF/G/K (C-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of MafF/G/K: 18-20 kDa.

Positive Controls: K-562 nuclear extract: sc-2130 or Sol8 nuclear extract: sc-2157.

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. Sawado, T., et al. 2003. The β-globin locus control region (LCR) functions primarily by enhancing the transition from transcription initiation to elongation. Genes Dev. 17: 1009-1018.
2. Papaiahgari, S., et al. 2004. NADPH oxidase and ERK signaling regulates hyperoxia-induced Nrf2-ARE transcriptional response in pulmonary epithelial cells. J. Biol. Chem. 279: 42302-42312.
3. Eghbali-Fatourechi, G.Z., et al. 2005. Circulating osteoblast-lineage cells in humans. N. Engl. J. Med. 352: 1959-1966.
4. Tanito, M., et al. 2005. Sulforaphane induces thioredoxin through the antioxidant-responsive element and attenuates retinal light damage in mice. Invest. Ophthalmol. Vis. Sci. 46: 979-987.

PROTOCOLS

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