SANTA CRUZ BIOTECHNOLOGY, INC.

MafF/G/K (D-12): sc-166548

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.

SOURCE

MafF/G/K (D-12) is a mouse monoclonal antibody raised against amino acids 63-126 of MafF/G/K of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain 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-166548 X, 200 µg/0.1 ml.

MafF/G/K (D-12) is available conjugated to agarose (sc-166548 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166548 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166548 PE), fluorescein (sc-166548 FITC), Alexa Fluor® 488 (sc-166548 AF488), Alexa Fluor® 546 (sc-166548 AF546), Alexa Fluor® 594 (sc-166548 AF594) or Alexa Fluor® 647 (sc-166548 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166548 AF680) or Alexa Fluor® 790 (sc-166548 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

MafF/G/K (D-12) is recommended for detection of MafF, MafG and NF-E2 p18 (also designated MafK) of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MafF/G/K (D-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

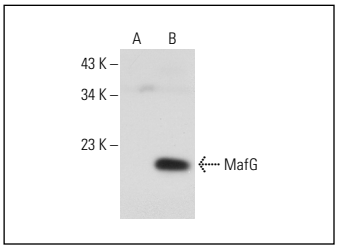
Molecular Weight of MafF/G/K: 18-20 kDa.

Positive Controls: MafG (m2): 293T Lysate: sc-125575, K-562 nuclear extract: sc-2130 or Sol8 nuclear extract: sc-2157.

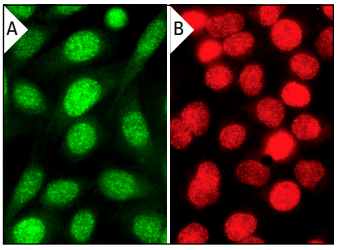
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



MafF/G/K (D-12): sc-166548. Western blot analysis of MafG expression in non-transfected: sc-117752 (**A**) and mouse MafG transfected: sc-125575 (**B**) 293T whole cell lysates.



MafF/G/K (D-12): sc-166548. Immunofluorescence staining of methanol-fixed SW480 (**A**) and HeLa (**B**) cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Ali, M., et al. 2018. The multiple myeloma risk allele at 5q15 lowers ELL2 expression and increases ribosomal gene expression. Nat. Commun. 9: 1649.
2. Li, M., et al. 2019. Nrf2 suppression delays diabetic wound healing through sustained oxidative stress and inflammation. Front. Pharmacol. 10: 1099.
3. Mbondji-Wonje, C., et al. 2020. Genetic variability of the U5 and downstream sequence of major HIV-1 subtypes and circulating recombinant forms. Sci. Rep. 10: 13214.
4. Cai, Y., et al. 2021. Crm1-dependent nuclear export of Bach1 is involved in the protective effect of hyperoside on oxidative damage in hepatocytes and CCl4-induced acute liver injury. J. Inflamm. Res. 14: 551-565.
5. Tessier, S.N., et al. 2021. Modulating Nrf2 transcription factor activity: revealing the regulatory mechanisms of antioxidant defenses during hibernation in 13-lined ground squirrels. Cell Biochem. Funct. 39: 623-635.

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.