SANTA CRUZ BIOTECHNOLOGY, INC.

MafB (h2): 293T Lysate: sc-114754

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 Kreml1/MafB (Maf-1) all bind to T-MARE sites and have been 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 that function as heterodimers with the large tissue-restricted subunit of NF-E2 called p45, and they are implicated in the transcriptional regulation of many erythroid-specific genes. MafB is expressed in a wide variety of tissues and encodes a protein containing a typical bZip motif in its carboxy-terminal region. As a transcriptional activator, MafB plays a pivotal role in regulating lineage-specific gene expression during hematopoiesis by repressing Ets-1-mediated transcription of key erythroid-specific genes in myeloid cells. c-Maf interacts with the c-Myb DNA binding domain and forms Myb-Maf complexes, which inturn mediate the cooperative interactions between c-Myb and Ets-1 during early myeloid cell differentiation.

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. Kataoka, K., et al. 1995. Small Maf proteins heterodimerize with Fos and may act as competitive repressors of the NF-E2 transcription factor. Mol. Cell. Biol. 15: 2180-2190.
4. Johnsen, O., et al. 1996. Small Maf proteins interact with the human transcription factor TCF11/Nrf1/LCR-F1. Nucleic Acids Res. 24: 4289-4297.
5. Matsushima-Hibiya, Y., et al. 1998. Rat Maf-related factors: the specificities of DNA binding and heterodimer formation. Biochem. Biophys. Res. Commun. 245: 412-418.
6. Hedge, S.P., et al. 1998. c-Maf interacts with c-Myb to regulate transcription of an early myeloid gene during differentiation. Mol. Cell. Biol. 18: 2729-2737.
7. Ring, B.Z., et al. 2000. Regulation of mouse lens fiber cell development and differentiation by the Maf gene. Development 127: 307-317.
8. Kim, K., et al. 2006. MafB negatively regulates RANKL-mediated osteoclast differentiation. Blood 109: 3253-3259.
9. Artner, I., et al. 2007. MafB is required for islet β cell maturation. Proc. Natl. Acad. Sci. USA 104: 3853-3858.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

CHROMOSOMAL LOCATION

Genetic locus: MAFB (human) mapping to 20q12.

PRODUCT

MafB (h2): 293T Lysate represents a lysate of human MafB transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

MafB (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive MafB antibodies. Recommended use: 10-20 µl per lane.

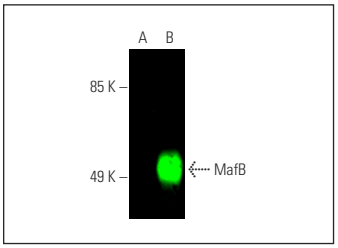
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

MafB (F-11): sc-74521 is recommended as a positive control antibody for Western Blot analysis of enhanced human MafB expression in MafB transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

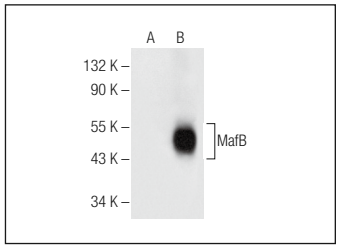
RECOMMENDED SUPPORT REAGENTS

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.

DATA



MafB (F-11): sc-74521. Near-infrared western blot analysis of MafB expression in non-transfected: sc-117752 (**A**) and human MafB transfected: sc-114754 (**B**) 293T whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



MafB (B-11): sc-376387. Western blot analysis of MafB expression in non-transfected: sc-117752 (**A**) and human MafB transfected: sc-114754 (**B**) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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