

MEF-2A (h): 293 Lysate: sc-111308

BACKGROUND

The myocyte enhancer factor-2 (MEF-2) family of transcription factors associate with corepressors or co-activators to regulate development and function of T cells, neuronal cells and muscle cells. Four family members arise from alternatively spliced transcripts, termed MEF-2A, -2B, -2C and -2D. These members bind as homo- and heterodimers to the MEF-2 site in the promoter region of affected genes. Differential regulation in the expression of the four transcripts implies functional distinction for each during embryogenesis and development. The process of differentiation from mesodermal precursor cells to myoblasts has led to the discovery of a variety of tissue-specific factors that regulate muscle gene expression. The myogenic basic helix-loop-helix proteins, including MyoD, myogenin, Myf-5 and MRF4, are one class of identified factors. A second family of DNA binding regulatory proteins is the MEF-2 family. Each of these proteins binds to the MEF-2 target DNA sequence present in the regulatory regions of many muscle-specific genes.

REFERENCES

1. Hidaka, K., et al. 1995. The MEF-2B homologue differentially expressed in mouse embryonal carcinoma cells. *Biochem. Biophys. Res. Commun.* 213: 555-560.
2. Hobson, GM., et al. 1995. Regional chromosomal assignments for four members of the MADS domain transcription enhancer factor 2 (MEF-2) gene family to human chromosomes 15q26, 19p12, 5q14, and 1q12-q23. *Genomics* 29: 704-711.
3. Zhao, M., et al. 1999. Regulation of the MEF-2 family of transcription factors by p38. *Mol. Cell. Biol.* 19: 21-30.
4. Han, A., et al. 2003. Sequence-specific recruitment of transcriptional corepressor Cabin-1 by myocyte enhancer factor-2. *Nature* 422: 730-734.
5. Feriotto, G., et al. 2006. Multiple levels of control of the expression of the human A β H-J-J locus encoding aspartyl- β -hydroxylase, Juncin, and junc-tate. *Ann. N.Y. Acad. Sci.* 1091: 184-190.
6. Meissner, J.D., et al. 2007. The p38 α / β mitogen-activated protein kinases mediate recruitment of CREB-binding protein to preserve fast Myosin heavy chain IId/x gene activity in myotubes. *J. Biol. Chem.* 282: 7265-7275.
7. Li, S. and Shang, Y. 2007. Regulation of SRC family co-activators by posttranslational modifications. *Cell. Signal.* 19: 1101-1112.
8. Barrett, A., et al. 2007. Breast cancer associated transcriptional repressor PLU-1/JARID1B interacts directly with histone deacetylases. *Int. J. Cancer* 121: 265-275.
9. van der Linden, A.M., et al. 2007. KIN-29 SIK regulates chemoreceptor gene expression via an MEF-2 transcription factor and a class II HDAC. *EMBO J.* 26: 358-370.

CHROMOSOMAL LOCATION

Genetic locus: MEF2A (human) mapping to 15q26.3.

PRODUCT

MEF-2A (h): 293 Lysate represents a lysate of human MEF-2A transfected 293 cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

MEF-2A (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive MEF-2 antibodies. Recommended use: 10-20 μ l per lane.

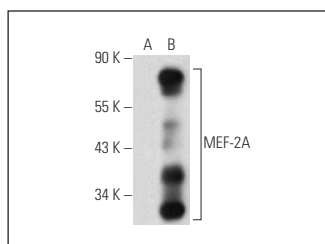
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

MEF-2 (D-6): sc-55500 is recommended as a positive control antibody for Western Blot analysis of enhanced human MEF-2 expression in MEF-2 transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

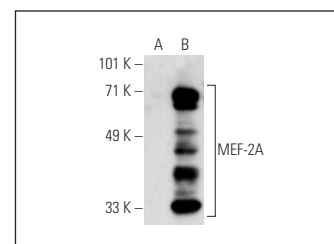
RECOMMENDED SUPPORT REAGENTS

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



MEF-2A (D-6): sc-55500. Western blot analysis of MEF-2A expression in non-transfected: sc-110760 (A) and human MEF-2A transfected: sc-111308 (B) 293 whole cell lysates.



MEF-2A (B-4): sc-17785. Western blot analysis of MEF-2A expression in non-transfected: sc-110760 (A) and human MEF-2A transfected: sc-111308 (B) 293 whole cell lysates.

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.

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.