

MEF-2A (1F8): sc-293457

BACKGROUND

The myocyte enhancer factor-2 (MEF-2) family of transcription factors associate with co-repressors 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 myocyte-specific enhancer factor-2 (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

- Hidaka, K., et al. 1995. The MEF2B homologue differentially expressed in mouse embryonal carcinoma cells. *Biochem. Biophys. Res. Commun.* 213: 555-560.
- Hobson, G.M., et al. 1995. Regional chromosomal assignments for four members of the MADS domain transcription enhancer factor 2 (MEF2) gene family to human chromosomes 15q26, 19p12, 5q14, and 1q12-q23. *Genomics* 29: 704-711.
- Zhao, M., et al. 1999. Regulation of the MEF2 family of transcription factors by p38. *Mol. Cell. Biol.* 19: 21-30.
- Han, A., et al. 2003. Sequence-specific recruitment of transcriptional co-repressor Cabin1 by myocyte enhancer factor-2. *Nature* 422: 730-734.
- 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, junctin, and junctate. *Ann. N.Y. Acad. Sci.* 1091: 184-190.
- 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.
- Li, S., et al. 2007. Regulation of SRC family coactivators by post-translational modifications. *Cell. Signal.* 19: 1101-1112.
- Barrett, A., et al. 2007. Breast cancer associated transcriptional repressor PLU-1/JARID1B interacts directly with histone deacetylases. *Int. J. Cancer* 121: 265-275.

CHROMOSOMAL LOCATION

Genetic locus: MEF2A (human) mapping to 15q26.3; Mef2a (mouse) mapping to 7 C.

SOURCE

MEF-2A (1F8) is a mouse monoclonal antibody raised against a recombinant protein fragment corresponding to amino acids 71-170 of MEF-2A of human origin.

PRODUCT

Each vial contains 100 μ g IgG_{2a} kappa light chain in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

MEF-2A (1F8) is recommended for detection of MEF-2A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Suitable for use as control antibody for MEF-2A siRNA (h): sc-35894, MEF-2A siRNA (m): sc-35895, MEF-2A shRNA Plasmid (h): sc-35894-SH, MEF-2A shRNA Plasmid (m): sc-35895-SH, MEF-2A shRNA (h) Lentiviral Particles: sc-35894-V and MEF-2A shRNA (m) Lentiviral Particles: sc-35895-V.

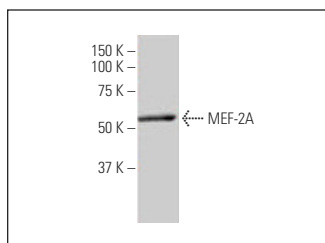
Molecular Weight of MEF-2A: 62 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

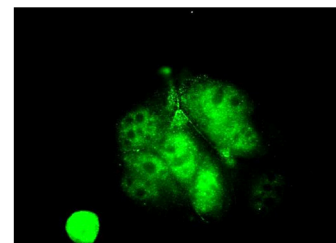
RECOMMENDED SUPPORT REAGENTS

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, TBS Blotto A Blocking Reagent: sc-2333 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



MEF-2A (1F8): sc-293457. Western blot analysis of MEF-2A expression in Hep G2 whole cell lysate.



MEF-2A (1F8): sc-293457. Immunofluorescence staining of methanol-fixed MCF7 cells showing nuclear localization.

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.