

MEF-2B (4B5): sc-517433

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, termed MEF-2A, -2B, -2C, and -2D, arise from alternatively spliced transcripts. 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. The MEF-2 family represents a second class of DNA binding regulatory proteins. 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 MEF2B homologue differentially expressed in mouse embryonal carcinoma cells. *Biochem. Biophys. Res. Commun.* 213: 555-560.
2. 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.
3. Zhao, M., et al. 1999. Regulation of the MEF2 family of transcription factors by p38. *Mol. Cell. Biol.* 19: 21-30.
4. Allen, M.P., et al. 2000. Myocyte enhancer factors-2B and -2C are required for adhesion related kinase repression of neuronal gonadotropin releasing hormone gene expression. *J. Biol. Chem.* 275: 39662-39670.
5. Han, A., et al. 2003. Sequence-specific recruitment of transcriptional co-repressor Cabin1 by myocyte enhancer factor-2. *Nature* 422: 730-734.
6. Suzuki, E., et al. 2004. Myocyte enhancer factor 2 mediates vascular inflammation via the p38-dependent pathway. *Circ. Res* 95: 42-49.

CHROMOSOMAL LOCATION

Genetic locus: MEF2B (human) mapping to 19p13.11.

SOURCE

MEF-2B (4B5) is a mouse monoclonal antibody raised against a recombinant protein corresponding to full length MEF-2B of human origin.

PRODUCT

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

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

MEF-2B (4B5) is recommended for detection of MEF-2B of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MEF-2B siRNA (h): sc-38060, MEF-2B shRNA Plasmid (h): sc-38060-SH and MEF-2B shRNA (h) Lentiviral Particles: sc-38060-V.

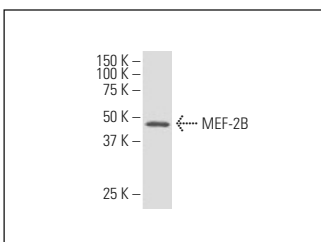
Molecular Weight of MEF-2B: 25 kDa.

Positive Controls: human stomach extract: sc-363780.

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).

DATA



MEF-2B (4B5): sc-517433. Western blot analysis of MEF-2B expression in human stomach tissue extract.

SELECT PRODUCT CITATIONS

1. Chu, C.S., et al. 2020. Unique immune cell coactivators specify locus control region function and cell stage. *Mol. Cell* 80: 845-861.e10.

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.