

MEF-2C (G-5): sc-518152

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 MEF-2B 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 (MEF-2) gene family to human chromosomes 15q26, 19p12, 5q14, and 1q12-q23. *Genomics* 29: 704-711.

CHROMOSOMAL LOCATION

Genetic locus: MEF2C (human) mapping to 5q14.3; Mef2c (mouse) mapping to 13 C3.

SOURCE

MEF-2C (G-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 116-142 within an internal region of MEF-2C of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ 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-518152 X, 200 µg/0.1 ml.

MEF-2C (G-5) is available conjugated to agarose (sc-518152 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518152 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518152 PE), fluorescein (sc-518152 FITC), Alexa Fluor® 488 (sc-518152 AF488), Alexa Fluor® 546 (sc-518152 AF546), Alexa Fluor® 594 (sc-518152 AF594) or Alexa Fluor® 647 (sc-518152 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518152 AF680) or Alexa Fluor® 790 (sc-518152 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

MEF-2C (G-5) is recommended for detection of MEF-2C 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).

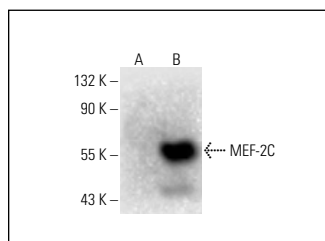
Suitable for use as control antibody for MEF-2C siRNA (h): sc-38062, MEF-2C siRNA (m): sc-38063, MEF-2C shRNA Plasmid (h): sc-38062-SH, MEF-2C shRNA Plasmid (m): sc-38063-SH, MEF-2C shRNA (h) Lentiviral Particles: sc-38062-V and MEF-2C shRNA (m) Lentiviral Particles: sc-38063-V.

MEF-2C (G-5) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

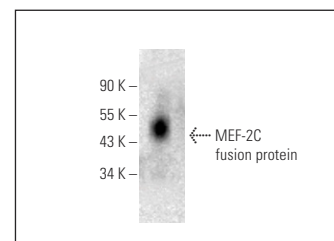
Molecular Weight of MEF-2C: 45 kDa.

Positive Controls: MEF-2C (m): 293T Lysate: sc-121587.

DATA



MEF-2C (G-5): sc-518152. Western blot analysis of MEF-2C expression in non-transfected: sc-117752 (A) and mouse MEF-2C transfected: sc-121587 (B) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



MEF-2C (G-5): sc-518152. Western blot analysis of human recombinant MEF-2C fusion protein. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

SELECT PRODUCT CITATIONS

- Steffens, A.A., et al. 2011. Sodium arsenite delays the differentiation of C2C12 mouse myoblast cells and alters methylation patterns on the transcription factor myogenin. *Toxicol. Appl. Pharmacol.* 250: 154-161.
- Xu, P., et al. 2022. MOBT alleviates pulmonary fibrosis through an IncIT-PF-hnRNP-I-complex-mediated signaling pathway. *Molecules* 27: 5336.
- Caetano, S., et al. 2023. MEF-2C and miR-194-5p: new players in triple negative breast cancer tumorigenesis. *Int. J. Mol. Sci.* 24: 14297.

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.

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