

# MEF-2A (B-4): sc-17785

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

MEF-2A (B-4) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of MEF-2A of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> 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-17785 X, 200 µg/0.1 ml.

MEF-2A (B-4) is available conjugated to agarose (sc-17785 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17785 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17785 PE), fluorescein (sc-17785 FITC), Alexa Fluor® 488 (sc-17785 AF488), Alexa Fluor® 546 (sc-17785 AF546), Alexa Fluor® 594 (sc-17785 AF594) or Alexa Fluor® 647 (sc-17785 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-17785 AF680) or Alexa Fluor® 790 (sc-17785 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-2A (B-4) is recommended for detection of MEF-2A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:200-1:2,000), 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

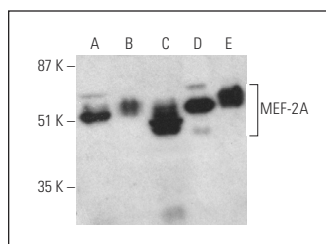
Suitable for use as control antibody for MEF-2A siRNA (h): sc-35894, MEF-2A siRNA (m): sc-35895, MEF-2A shRNA Plasmid (h): sc-35894-SH, MEF-2A shRNA Plasmid (m): sc-35895-SH, MEF-2A shRNA (h) Lentiviral Particles: sc-35894-V and MEF-2A shRNA (m) Lentiviral Particles: sc-35895-V.

MEF-2A (B-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

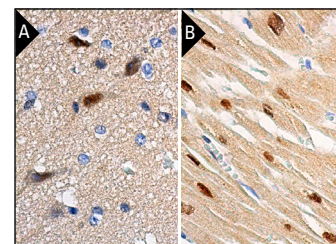
Molecular Weight of MEF-2A: 40-65 kDa.

Positive Controls: A-10 cell lysate: sc-3806, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

## DATA



MEF-2A (B-4) HRP: sc-17785 HRP. Direct western blot analysis of MEF-2A expression in Daudi (A), SH-SY5Y (B), A-10 (C), NIH/3T3 (D) and HeLa (E) whole cell lysates.



MEF-2A (B-4): sc-17785. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing nuclear staining of neuronal cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing nuclear and faint cytoplasmic staining of myocytes (B).

## SELECT PRODUCT CITATIONS

- Karasseva, N., et al. 2003. Transcription enhancer factor 1 binds multiple muscle MEF-2 and A/T-rich elements during fast-to-slow skeletal muscle fiber type transitions. *Mol. Cell. Biol.* 23: 5143-5164.
- Nakaya, T., et al. 2013. p600 plays essential roles in fetal development. *PLoS ONE* 8: e66269.
- Reineke, E.L., et al. 2014. Steroid receptor coactivator-2 is a dual regulator of cardiac transcription factor function. *J. Biol. Chem.* 289: 17721-17731.
- Cho, J.H., et al. 2016. Proteomic assessment of the relevant factors affecting pork meat quality associated with *Longissimus dorsi* muscles in Duroc pigs. *Asian-australas. J. Anim. Sci.* 29: 1653-1663.

## RESEARCH USE

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

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