SANTA CRUZ BIOTECHNOLOGY, INC.

MEF-2 (N-18): sc-13917

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The myocyte enhancer factor-2 (MEF-2) family of transcription factors associated 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.

SOURCE

MEF-2 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of MEF-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-13917 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-13917 X, 200 µg/0.1 ml.

APPLICATIONS

MEF-2 (N-18) is recommended for detection of MEF-2A, -2B, -2C and -2D of mouse, rat and 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

MEF-2 (N-18) is also recommended for detection of MEF-2A,B,C and D in additional species, including equine, canine, bovine, porcine and avian.

MEF-2 (N-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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

Positive Controls: MEF-2 (h): 293 Lysate: sc-111308, rat brain extract: sc-2392 or mouse brain extract: sc-2253.

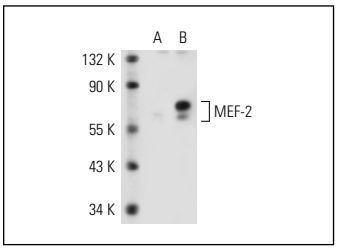
STORAGE

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

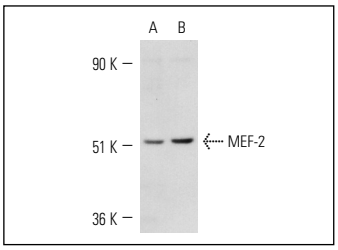
RESEARCH USE

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

DATA



MEF-2 (N-18): sc-13917. Western blot analysis of MEF-2 expression in non-transfected: sc-110760 (**A**) and human MEF-2 transfected: sc-111308 (**B**) 293 whole cell lysates.



MEF-2 (N-18): sc-13917. Western blot analysis of MEF-2 expression in rat (**A**) and mouse (**B**) brain tissue extracts.

SELECT PRODUCT CITATIONS

1. Bar, H., et al. 2003. Upregulation of embryonic transcription factors in right ventricular hypertrophy. Basic Res. Cardiol. 98: 285-294.
2. Bartunek, J., et al. 2007. Pretreatment of adult bone marrow mesenchymal stem cells with cardiomyogenic growth factors and repair of the chronically infarcted myocardium. Am. J. Physiol. Heart Circ. Physiol. 292: H1095-H1104.
3. Wang, B.W., et al. 2008. Angiotensin II activates myostatin expression in cultured rat neonatal cardiomyocytes via p38 MAP kinase and myocyte enhance factor 2 pathway. J. Endocrinol. 197: 85-93.
4. Li, Z., et al. 2008. Myocyte enhancer factor 2C as a neurogenic and anti-apoptotic transcription factor in murine embryonic stem cells. J. Neurosci. 28: 6557-6568.
5. Montano, M.M., et al. 2008. Mutation of the HEXIM1 gene results in defects during heart and vascular development partly through downregulation of vascular endothelial growth factor. Circ. Res. 102: 415-422.
6. Seenundun, S., et al. 2010. UTX mediates demethylation of H3K27me3 at muscle-specific genes during myogenesis. EMBO J. 29: 1401-1411.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.