SANTA CRUZ BIOTECHNOLOGY, INC.

MEF-2C (E-17): sc-13266

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.

CHROMOSOMAL LOCATION

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

SOURCE

MEF-2C (E-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MEF-2C of human origin.

PRODUCT

Each vial contains 100 µg IgG 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-13266 X, 100 µg/0.1 ml.

Blocking peptide available for competition studies, sc-13266 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

MEF-2C (E-17) is recommended for detection of MEF-2C 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MEF-2C (E-17) is also recommended for detection of MEF-2C in additional species, including equine, canine, bovine, porcine and avian.

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.

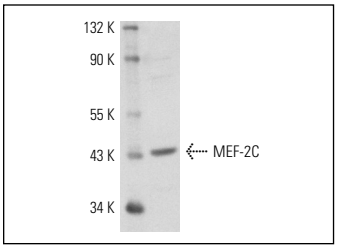
MEF-2C (E-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of MEF-2C: 45 kDa.

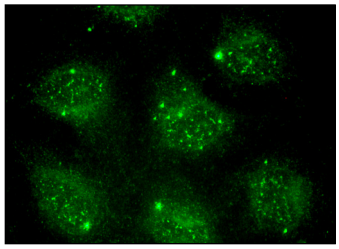
STORAGE

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

DATA



MEF-2C (E-17): sc-13266. Western blot analysis of MEF-2C expression in SK-N-SH whole cell lysate.



MEF-2C (E-17): sc-13266. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Chen, S.E., et al. 2005. Role of TNFα signaling in regeneration of cardiotoxin-injured muscle. Am. J. Physiol., Cell Physiol. 289: C1179-C1187.
2. Granjon, A., et al. 2009. The microRNA signature in response to Insulin reveals its implication in the transcriptional action of Insulin in human skeletal muscle and the role of a sterol regulatory element-binding protein-1c/myocyte enhancer factor 2C pathway. Diabetes 2555-2564.
3. Voronova, A., et al. 2011. Gli2 and MEF2C activate each other's expression and function synergistically during cardiomyogenesis *in vitro*. Nucleic Acids Res. 40: 3329-3347.
4. Pessac, B., et al. 2011. Hematopoietic progenitors express embryonic stem cell and germ layer genes. C. R. Biol. 334: 300-306.
5. Hong, T., et al. 2011. Fine-tuned regulation of the PGC-1α gene transcription by different intracellular signaling pathways. Am. J. Physiol. Endocrinol. Metab. 300: E500-E507.
6. Pane, L.S., et al. 2012. Tbx1 is a negative modulator of Mef2c. Hum. Mol. Genet. 21: 2485-2496.
7. Dietrich, J.B., et al. 2012. Cocaine induces the expression of MEF2C transcription factor in rat striatum through activation of SIK1 and phosphorylation of the histone deacetylase HDAC5. Synapse 66: 61-70.

RESEARCH USE

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