**BACKGROUND**

Myogenic helix-loop-helix (HLH) transcription factors of the myogenin/MyoD class have been studied in detail over the past few years. Muscle gene induction by these proteins depends upon sequence-specific DNA binding at the E box DNA element present in many muscle enhancers and promoters. MEF-2 is a muscle-specific DNA binding protein that recognizes an A+T-rich sequence [CTA (A/T)4 TAG] localized in the control regions of numerous muscle-specific genes. MEF-2 belongs to the MADS (MCM 1, Agamous, Deficiens and serum-response factor) box family of transcription factors. The MEF-2 proteins comprise several alternatively spliced isoforms from the MEF-2 gene and a related factor encoded by the related gene xMEF-2. MEF-2 expression is ubiquitous but preferential in skeletal and cardiac muscle cells. The Serine 59 residue, located between the MADS and MEF-2 domains of MEF-2C, is phosphorylated in vivo and can be phosphorylated in vitro by casein kinase-II (CKII). Phosphorylation of this site enhances the DNA binding and transcriptional activity of MEF-2C by increasing its DNA binding activity 5-fold.

**CHROMOSOMAL LOCATION**

Genetic locus: MYEF2 (human) mapping to 15q21.1; Myef2 (mouse) mapping to 1 F1.

**SOURCE**

p-MEF-2 (Ser 59)-R is a rabbit polyclonal antibody raised against a short amino acid sequence containing Ser 59 phosphorylated 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-13919 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-13919 X, 200 µg/0.1 ml.

**APPLICATIONS**

p-MEF-2 (Ser 59)-R is recommended for detection of Ser 59 phosphorylated MEF-2 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range: 1:100-1:1000) or solid phase ELISA (starting dilution 1:30, dilution range: 1:300-1:3000).

p-MEF-2 (Ser 59)-R is also recommended for detection of correspondingly phosphorylated MEF-2 in additional species, including equine, canine, bovine, porcine and avian.

p-MEF-2 (Ser 59) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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

**RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:300-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

**DATA**

Western blot analysis of MEF-2 phosphorylation in untreated (A, C), and lambda protein phosphatase (sc-20332A) treated (B, D) K-562 whole cell lysates. Antibodies tested include p-MEF-2 (Ser 59)-R: sc-13919-R (A, B) and MEF-2 (C-21): sc-313 (C, D).

**SELECT PRODUCT CITATIONS**


**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.

**PROTOCOLS**

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