



Anti-MEF2D (Myocyte-specific enhancer factor 2D) Phospho-Polyclonal Antibody

Category: Phospho Polyclonal Antibody

Catalog#: Phospho AB1I201(Phospho Site: 180S)

Species Reactivity: Human, Mouse, rat

Immunogen/Specificity:

Polyclonal antibody produced in rabbits immunizing with a synthetic peptide corresponding to N-terminal residues of human MEF2D (Myocyte-specific enhancer factor 2D)

Description: MEF2D (Myocyte-specific enhancer factor 2D) is a transcriptional activator which binds specifically to the MEF2 element, 5'-YTA[AT](4)TAR-3', found in numerous muscle-specific, growth factor- and stress-induced genes. MEF2D mediates cellular functions not only in skeletal and cardiac muscle development, but also in neuronal differentiation and survival. MEF2D plays diverse roles in the control of cell growth, survival and apoptosis via p38 MAPK signaling in muscle-specific and/or growth factor-related transcription. MEF2D plays a critical role in the regulation of neuronal apoptosis (By similarity). MEF2D forms a complex with class II HDACs in undifferentiating cells. On myogenic differentiation, HDACs are released into the cytoplasm allowing MEF2s to interact with other proteins for activation. Interacts with HDAC4 (in undifferentiating cells); the interaction translocates MEF2D to nuclear dots. Forms a heterodimer with MEF2A. Phosphorylated on Ser-444 by CDK5 is required for Lys-439 sumoylation and inhibits transcriptional activity. In neurons, enhanced CDK5 activity induced by neurotoxins promotes caspase 3-mediated cleavage leading to neuron apoptosis. Phosphorylation on Ser-180 can be enhanced by EGF.

Reference:

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Kato,Y., Zhao, et al, J. Biol. Chem. 275 (24), 18534-18540 (2000)
Okamoto,S., et al, Proc. Natl. Acad. Sci. U.S.A. 99 (6), 3974-3979 (2002)
Gong,X., et al, Neuron 38 (1), 33-46 (2003)
Beausoleil,S.A., et al, Proc. Natl. Acad. Sci. U.S.A. 101 (33), 12130-12135 (2004)

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