

Product name:	MEF-2D (phospho Ser444) Rabbit Polyclonal Antibody
Cat number:	ABN04998
Conjugate:	Unconjugated
Size:	100µL
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	The antiserum was produced against synthesized peptide derived from human MEF2D around the phosphorylation site of Ser444. AA range:410-459
Reactivity:	Human,Mouse,Rat
Applications:	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:5000-1:20000
Molecular Weight:	55kDa
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

Background:

This gene is a member of the myocyte-specific enhancer factor 2 (MEF2) family of transcription factors. Members of this family are involved in control of muscle and neuronal cell differentiation and development, and are regulated by class II histone deacetylases. Fusions of the encoded protein with Deleted in Azoospermia-Associated Protein 1 (DAZAP1) due to a translocation have been found in an acute lymphoblastic leukemia cell line, suggesting a role in leukemogenesis. The encoded protein may also be involved in Parkinson disease and myotonic dystrophy. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Oct 2012],developmental stage:Present in myotubes and also in undifferentiated myoblasts.,domain:The beta domain, missing in a number of isoforms, is required for enhancement of transcriptional activity.,function: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. Mediates cellular functions not only in skeletal and cardiac muscle development, but also in neuronal differentiation and survival. 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. Plays a critical role in the regulation of neuronal apoptosis.,PTM:Acetylated on Lys-439 by CREBBP. Deacetylated by SIRT1.,PTM: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.,PTM:Proteolytically cleaved in cerebellar granule neurons on several sites by caspase 7 following neurotoxicity. Preferentially cleaves the CDK5-mediated hyperphosphorylated form which leads to neuron apoptosis and transcriptional inactivation.,PTM:Sumoylated on Lys-439 by SUMO2 but not SUMO1; which inhibits transcriptional activity and myogenic activity. Desumoylated by SENP3.,similarity:Belongs to the MEF2 family.,similarity:Contains 1 MADS-box domain.,similarity:Contains 1 Mef2-type DNA-binding domain.,subcellular location:Translocated by HDAC4 to nuclear dots.,subunit: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.,