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Rabbit Anti-MEF2C antibody

SL4130R

Product Name:	MEF2C
Chinese Name:	肌细胞增强因子2C抗体
Alias:	MADS box transcription enhancer factor 2 polypeptide C (myocyte enhancer factor 2C); Myocyte enhancer factor 2C; Myocyte specific enhancer factor 2C; Similar to MADS box transcription enhancer factor 2 polypeptide C; MEF2C_HUMAN.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Dog,Pig,Cow,Rabbit,Sheep,
Applications:	WB=1:500-2000ELISA=1:500-1000IF=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	51kDa
Cellular localization:	The nucleus
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human MEF2C:31-130/473
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	The myocyte enhancer factor-2 (MEF-2) family of transcription factors associate with co-repessors 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 duing

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.

Function:
Transcription activator which binds specifically to the MEF2 element present in the regulatory regions of many muscle-specific genes. Controls cardiac morphogenesis and myogenesis, and is also involved in vascular development. Plays an essential role in hippocampal-dependent learning and memory by suppressing the number of excitatory synapses and thus regulating basal and evoked synaptic transmission. Crucial for normal neuronal development, distribution, and electrical activity in the neocortex. Necessary for proper development of megakaryocytes and platelets and for bone marrow B lymphopoiesis. Required for B-cell survival and proliferation in response to BCR stimulation, efficient IgG1 antibody responses to T-cell-dependent antigens and for normal induction of germinal center B cells. May also be involved in neurogenesis and in the development of cortical architecture (By similarity). Isoform 3 and isoform 4, which lack the repressor domain, are more active than isoform 1 and isoform 2.

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 EP300 in differentiating cells; the interaction acetylates MEF2C leading to increased DNA binding and activation. Interacts with HDAC7 and CARM1 (By similarity). Interacts with HDAC4, HDAC7 AND HDAC9; the interaction WITH HDACs represses transcriptional activity. Interacts with MYOCD (By similarity).

Subcellular Location:
Nucleus.

Tissue Specificity:
Expressed in brain and skeletal muscle.

Post-translational modifications:
Phosphorylation on Ser-59 enhances DNA binding activity (By similarity).
Phosphorylation on Ser-396 is required for Lys-391 sumoylation and inhibits transcriptional activity.
Acetylated by p300 on several sites in diffentiating myocytes. Acetylation on Lys-4 increases DNA binding and transactivation.
Sumoylated on Lys-391 by SUMO2 but not by SUMO1 represses transcriptional activity.
Proteolytically cleaved in cerebellar granule neurons, probably by caspase 7, following

neurotoxicity. Preferentially cleaves the CDK5-mediated hyperphosphorylated form which leads to neuron apoptosis and transcriptional inactivation.

DISEASE:
Defects in MEF2C are the cause of mental retardation-stereotypic movements-epilepsy and/or cerebral malformations (MRSME) [MIM:613443]. It is a disorder characterized by severe mental retardation, absent speech, hypotonia, poor eye contact and stereotypic movements. Dysmorphic features include high broad forehead with variable small chin, short nose with anteverted nares, large open mouth, upslanted palpebral fissures and prominent eyebrows. Some patients have seizures.

Similarity:
Belongs to the MEF2 family.
Contains 1 MADS-box domain.
Contains 1 Mef2-type DNA-binding domain.

SWISS:
Q06413

Gene ID:
4208

Database links:

Entrez Gene: 512254 Cow

Entrez Gene: 4208 Human

Entrez Gene: 17260 Mouse

Entrez Gene: 733590 Pig

Entrez Gene: 499497 Rat

Omim: 600662 Human

SwissProt: Q2KIA0 Cow

SwissProt: Q06413 Human

SwissProt: Q8CFN5 Mouse

SwissProt: A4UTP7 Pig

Unigene: 649965 Human

Unigene: 24001 Mouse

	Unigene: 451574 Mouse Unigene: 484098 Mouse **Important Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.