

Product datasheet

Recombinant Human MEF2C protein ab114241

1 Image

Description

Product name	Recombinant Human MEF2C protein
Expression system	Wheat germ
Accession	<u>Q06413</u>
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	MGRKKIQITRIMDERNRQVTFTRKRFGLMKKAYELSVLCDC EIALIIFNS TNKLFQYASTDMDKVLLKYTEYNEQ HESRTNSDIVETLRKKGLNGCDS PDPDADDSVGHSPESDKYRKINEDIDLMISRQRLCAVPP PNFEMPVSIP VS SHNSLVYSNPVSSLGNPNLLPLAHPQLQRNSMSPGVTHR PPSAGNT GGLMGGDLTSGAGTSAGNGYGNPRNSPGL LVSPGNLNKNMQAKSPPPM NLGMNMRKPDRLRVLIPPGSKNTMPSVSEDVDLLLNRINN SQSAQSLATP VVSVAT PTLPGQGMGGYPSAISTTYGTEYSLSSADLSSLGFGNTAS AL HLGSVTGWQQQHLHNMQPSALSQLGACTSTHLS QSSNLSLPSTQSLNI KSEPVSPPRDRTTTTPSRYPQHTRHEAGRSPVDSLSSCSS SYDGSDREDHR NEFHSPIGLT RPSPDERESPSVKRMRLSE
Predicted molecular weight	78 kDa including tags
Amino acids	1 to 469

Specifications

Our **Abpromise guarantee** covers the use of **ab114241** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	ELISA SDS-PAGE
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Western blot

Form Liquid

Additional notes

Preparation and Storage

Stability and Storage Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles.
pH: 8.00
Constituents: 0.3% Glutathione, 0.79% Tris HCl

General Info

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.

Tissue specificity Expressed in brain and skeletal muscle.

Involvement in 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.

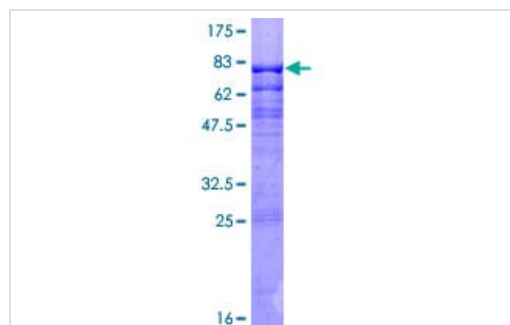
Sequence similarities Belongs to the MEF2 family.
Contains 1 MADS-box domain.
Contains 1 Mef2-type DNA-binding domain.

Developmental stage Expression is highest during the early stages of postnatal development, at later stages levels greatly decrease.

Domain The beta domain, missing in a number of isoforms, is required for enhancement of transcriptional activity.

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 differentiating 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.

Images



12.5% SDS-PAGE showing ab114241 at approximately 77.66kDa stained with Coomassie Blue.

SDS-PAGE - Recombinant Human MEF2C protein
(ab114241)

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