

Product datasheet

Recombinant Human MEF2A protein ab204772

2 Images

Description

Product name	Recombinant Human MEF2A protein	
Purity	> 90 % Purified via His tag. by immobilized-metal affinity chromatography (IMAC) purification.	
Expression system	Escherichia coli	
Accession	Q02078-5	
Protein length	Full length protein	
Animal free	No	
Nature	Recombinant	
Species	Human	
Sequence	<pre> MGRKKIQITR IMDERNRQVT FTKRKFGLMK KAYELSVLCD CEIALIIFNS SNKLFQYAST DMDKVLLKYT EYNEPHESRT NSDMEALNK KEHRGCDSPD PDTSYVLTPH TEEKYKKINE EFDNMMRNHK IAPGLPPQNF SMSVTVPVTS PNALSYTNPG SSLVSPSLAA SSTLTDSSML SPPQTTLHRN VSPGAPQRPP STGNAGGMLS TTDLTVPNGA GSSPVGNFV NSRASPNLIG ATGANSLGKV MPTKSPPPP GGNLGMNSRK PDLRVVIPPS SKGMMPLNT QRISSSQATQ PLATPVVSVT TPLPQQGLV YSAMPTAYNT DYSLTSADLS ALQGFNSPGM LSLGQVSAWQ QHHLGQAALS SLVAGGQLSQ GSNLSINTNQ NISKSEPI SPPRDRMTPSG FQQQQQQQQQ QQPPPPQPQ QPPQPQPRQ EMGRSPVDSL SSSSSYDGS DREDPRGDFH SPMLGRPPN TEDRESPSVK RMRMDAWVT </pre>	
Predicted molecular weight	55 kDa including tags	
Amino acids	1 to 499	
Additional sequence information	Isoform 5. NP_005578.2	

Specifications

Our [Abpromise guarantee](#) covers the use of **ab204772** in the following tested applications.

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

Applications	Western blot Mass Spectrometry SDS-PAGE
Mass spectrometry	MALDI-TOF
Form	Liquid

Preparation and Storage

Stability and Storage	Shipped on Dry Ice. Upon delivery aliquot. Store at -80°C. Avoid freeze / thaw cycle. Constituent: 100% PBS
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General Info

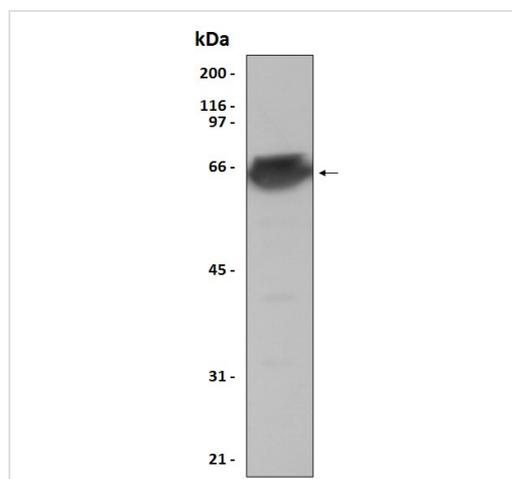
Function	Transcriptional activator which binds specifically to the MEF2 element, 5'-YTA[AT](4)TAR-3', found in numerous muscle-specific genes. Also involved in the activation of numerous growth factor- and stress-induced genes. Mediates cellular functions not only in skeletal and cardiac muscle development, 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. In cerebellar granule neurons, phosphorylated and sumoylated MEF2A represses transcription of NUR77 promoting synaptic differentiation.
Tissue specificity	Isoform MEF2 and isoform MEFA are expressed only in skeletal and cardiac muscle and in the brain. Isoform RSRFC4 and isoform RSRFC9 are expressed in all tissues examined.
Involvement in disease	Defects in MEF2A might be a cause of autosomal dominant coronary artery disease 1 with myocardial infarction (ADCAD1) [MIM:608320].
Sequence similarities	Belongs to the MEF2 family. Contains 1 MADS-box domain. Contains 1 Mef2-type DNA-binding domain.
Post-translational modifications	Constitutive phosphorylation on Ser-408 promotes Lys-403 sumoylation thus preventing acetylation at this site. Dephosphorylation on Ser-408 by PPP3CA upon neuron depolarization promotes a switch from sumoylation to acetylation on residue Lys-403 leading to inhibition of dendrite claw differentiation. Phosphorylation on Thr-312 and Thr-319 are the main sites involved in p38 MAPK signaling and activate transcription. Phosphorylated on these sites by MAPK14/p38alpha and MAPK11/p38beta, but not by MAPK13/p38delta nor by MAPK12/p38gamma. Phosphorylation on Ser-408 by CDK5 induced by neurotoxicity inhibits MEF2A transcriptional activation leading to apoptosis of cortical neurons. Phosphorylation on Thr-312, Thr-319 and Ser-355 can be induced by EGF. Sumoylation on Lys-403 is enhanced by PIAS1 and represses transcriptional activity. Phosphorylation on Ser-408 is required for sumoylation. Has no effect on nuclear location nor on DNA binding. Sumoylated by SUMO1 and, to a lesser extent by SUMO2 and SUMO3. PIASx facilitates sumoylation in postsynaptic dendrites in the cerebellar cortex and promotes their morphogenesis. Acetylation on Lys-403 activates transcriptional activity. Acetylated by p300 on several sites in differentiating myocytes. Acetylation on Lys-4 increases DNA binding and transactivation (By similarity). Hyperacetylation by p300 leads to enhanced cardiac myocyte growth and heart failure. Proteolytically cleaved in cerebellar granule neurons on several sites by caspase 3 and caspase 7 following neurotoxicity. Preferentially cleaves the CDK5-mediated hyperphosphorylated form

which leads to neuron apoptosis and transcriptional inactivation.

Cellular localization

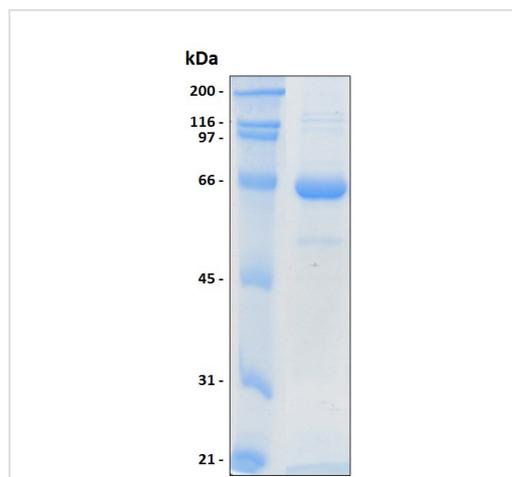
Nucleus.

Images



anti-6xHis monoclonal antibody + Recombinant Human MEF2A protein (ab204772)

Western blot - Recombinant Human MEF2A protein (ab204772)



10% SDS-PAGE analysis of ab204772 stained with Coomassie Blue.

SDS-PAGE - Recombinant Human MEF2A protein (ab204772)

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