




Product datasheet

Anti-MEF2A antibody [2F9H2] ab181494

[1 References](#) [2 Images](#)

Overview

Product name	Anti-MEF2A antibody [2F9H2]
Description	Mouse monoclonal [2F9H2] to MEF2A
Host species	Mouse
Tested applications	Suitable for: WB
Species reactivity	Reacts with: Human, Recombinant fragment Predicted to work with: Mouse, Rat, Cow, Pig, Orangutan 
Immunogen	Recombinant fragment corresponding to Human MEF2A aa 391-497. (Expressed in E.coli). Sequence: SIKSEPISPPRDRMTPSGFQQQQQQQQQQPPPPQPQ QPPQPQPRQEM GRSPVDSLSSSSSYDGSDREDPRGDFHSPMLGRPPNT EDRESPSVKRM RMDAWVT Database link: Q02078-6 <div>  Run BLAST with  Run BLAST with </div>
Positive control	MEF2A (AA: 391-497) recombinant protein; MEF2A (AA: 391-497)-hlgFc transfected HEK293 cell lysate.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.05% Sodium azide

	Constituent: 99% PBS
	Contains 0.5% protein stabilizer.
Purity	Protein G purified
Purification notes	Purified from tissue culture supernatant.
Clonality	Monoclonal
Clone number	2F9H2
Isotype	IgG1

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab181494 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/500 - 1/2000. Predicted molecular weight: 55 kDa.

Target

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

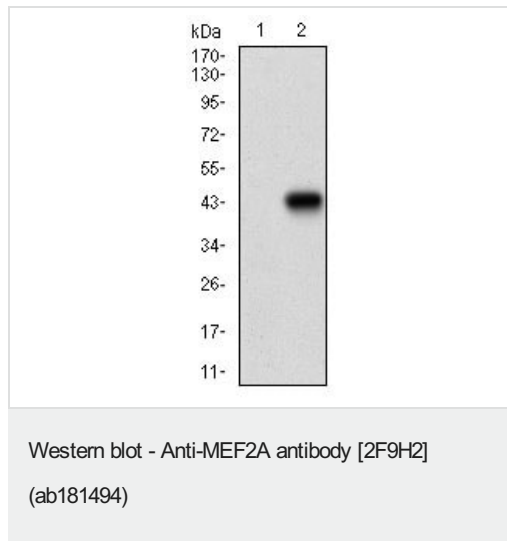
facilitates sumoylation in postsynaptic dendrites in the cerebellar cortex and promotes their morphogenesis.

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

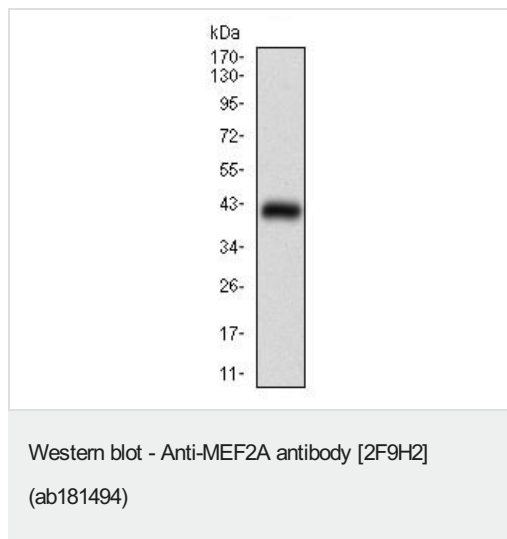


All lanes : Anti-MEF2A antibody [2F9H2] (ab181494) at 1/500 dilution

Lane 1 : HEK293 cell lysate

Lane 2 : MEF2A (AA: 391-497)-hlgGFc transfected HEK293 cell lysate

Predicted band size: 55 kDa



Anti-MEF2A antibody [2F9H2] (ab181494) at 1/500 dilution + MEF2A (AA: 391-497) recombinant protein

Predicted band size: 55 kDa

Expected MWt is 38 kDa.

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