

## ARG41322 anti-MEF2A antibody

Package: 50 µg  
Store at: -20°C

### Summary

Product Description	Rabbit Polyclonal antibody recognizes MEF2A
Tested Reactivity	Hu, Ms, Rat
Tested Application	ICC/IF, IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	MEF2A
Species	Human
Immunogen	Synthetic peptide corresponding to aa. 466-507 of Human MEF2A.
Conjugation	Un-conjugated
Alternate Names	RSRFC4; RSRFC9; ADCAD1; mef2; Myocyte-specific enhancer factor 2A; Serum response factor-like protein 1

### Application Instructions

Application table	Application	Dilution
	ICC/IF	1:200 - 1:1000
	IHC-P	1:200 - 1:1000
	WB	1:500 - 1:2000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Observed Size	55 kDa	

### Properties

Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	PBS, 0.025% Sodium azide and 2.5% BSA.
Preservative	0.025% Sodium azide
Stabilizer	2.5% BSA
Concentration	0.5 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

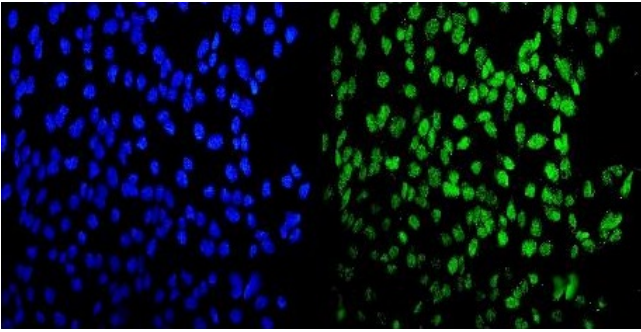
**Note**

For laboratory research only, not for drug, diagnostic or other use.

## Bioinformation

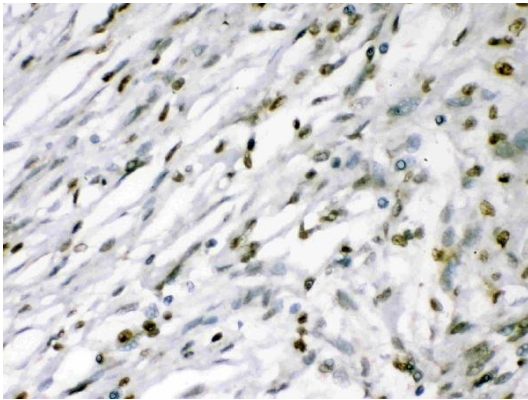
---

Gene Symbol	MEF2A
Gene Full Name	myocyte enhancer factor 2A
Background	<p>The protein encoded by this gene is a DNA-binding transcription factor that activates many muscle-specific, growth factor-induced, and stress-induced genes. The encoded protein can act as a homodimer or as a heterodimer and is involved in several cellular processes, including muscle development, neuronal differentiation, cell growth control, and apoptosis. Defects in this gene could be a cause of autosomal dominant coronary artery disease 1 with myocardial infarction (ADCAD1). Several transcript variants encoding different isoforms have been found for this gene.[provided by RefSeq, Jan 2010]</p>
Function	<p>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. Associates with chromatin to the ZNF16 promoter. [UniProt]</p>
Calculated Mw	55 kDa
PTM	<p>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.</p> <p>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 with SUMO1 and, to a lesser extent with SUMO2 and SUMO3. PIASx facilitates sumoylation in postsynaptic dendrites in the cerebellar cortex and promotes their morphogenesis (By similarity).</p> <p>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.</p> <p>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. [UniProt]</p>
Cellular Localization	Nucleus. [UniProt]



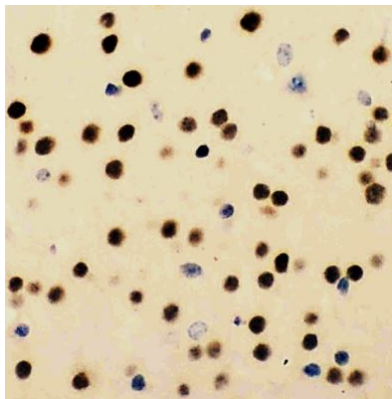
ARG41322 anti-MEF2A antibody ICC/IF image

Immunofluorescence: U2OS cells were blocked with 10% goat serum and then stained with ARG41322 anti-MEF2A antibody (green) at 2  $\mu\text{g/ml}$  dilution, overnight at 4°C. DAPI (blue) for nuclear staining.



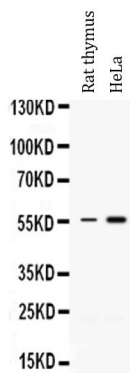
ARG41322 anti-MEF2A antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human meningeoma tissue stained with ARG41322 anti-MEF2A antibody at 1  $\mu\text{g/ml}$  dilution.



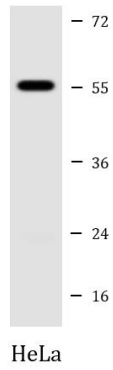
ARG41322 anti-MEF2A antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Mouse brain tissue stained with ARG41322 anti-MEF2A antibody at 1:500 dilution.



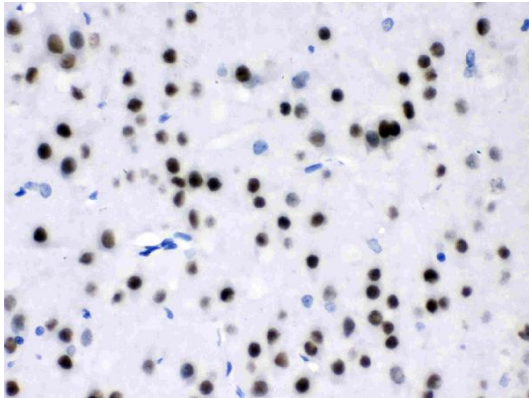
ARG41322 anti-MEF2A antibody WB image

Western blot: Rat thymus and HeLa whole cell lysates stained with ARG41322 anti-MEF2A antibody at 0.5  $\mu\text{g/ml}$  dilution.



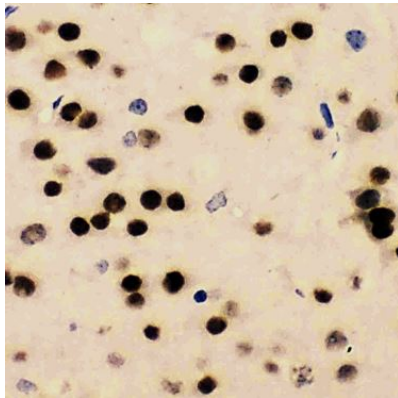
#### ARG41322 anti-MEF2A antibody WB image

Western blot: HeLa whole cell lysate stained with ARG41322 anti-MEF2A antibody at 1:1000 dilution.



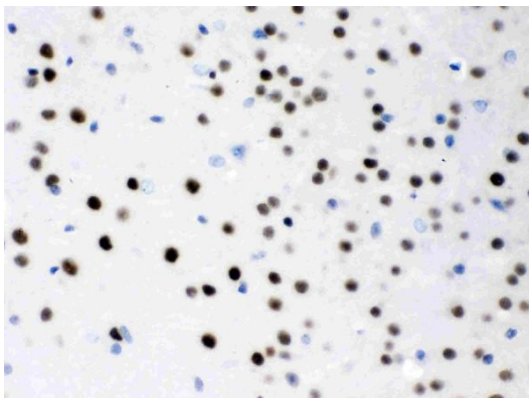
#### ARG41322 anti-MEF2A antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Rat brain tissue stained with ARG41322 anti-MEF2A antibody at 1 µg/ml dilution.



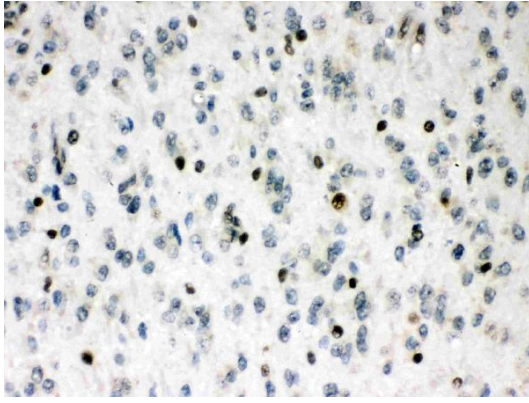
#### ARG41322 anti-MEF2A antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Rat brain tissue stained with ARG41322 anti-MEF2A antibody at 1:500 dilution.



#### ARG41322 anti-MEF2A antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Mouse brain tissue stained with ARG41322 anti-MEF2A antibody at 1 µg/ml dilution.



ARG41322 anti-MEF2A antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human glioma tissue stained with ARG41322 anti-MEF2A antibody at 1  $\mu\text{g}/\text{ml}$  dilution.