

Rabbit anti-Human, Mouse MEF2A Polyclonal Antibody | anti-MEF2A antibody

Phospho-MEF2A (Ser408) Antibody

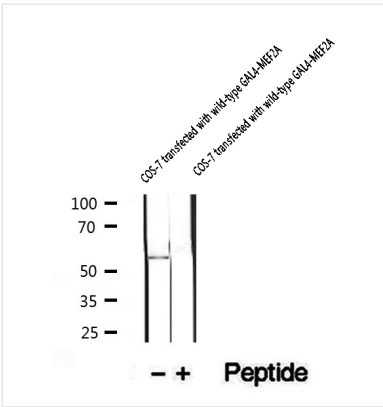
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA321347	Rabbit	Human, Mouse	Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

MEF2A; Polyclonal Antibody; Phospho-MEF2A (Ser408) Antibody; ADCAD1; MADS box transcription enhancer factor 2; polypeptide A (myocyte enhancer factor 2A); MEF2; MEF2A_HUMAN; Myocyte enhancer factor 2A; Myocyte-specific enhancer factor 2A; RSRFC4; RSRFC9; Serum response factor like protein 1; Serum response factor-like protein 1; anti-MEF2A antibody

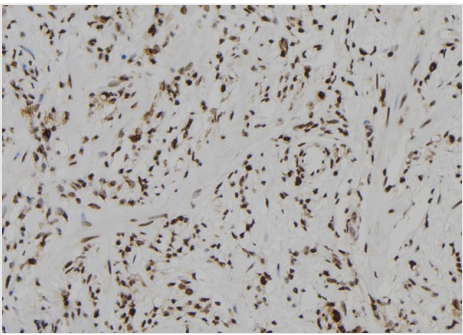
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-MEF2A (Ser408) antibody detects endogenous levels of MEF2A.
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho-and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	437
Applicable Applications for anti-MEF2A antibody	IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human MEF2A around the phosphorylation site of Ser408.
Subcellular Location	MEF2A: Nucleus. MEF2C: Nucleus.
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.
Predicted Cross Reactivity	Pig, Bovine, Horse, Sheep, Rabbit, Dog, Chicken, Xenopus
Similarity	Pig (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (92%), Xenopus (92%)
Conjugation	Unconjugated
Epitope	Phospho Ser408
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



WB (Western Blot)

Western blot analysis of extracts of COS-7 cells transfected with wild-type GAL4-MEF2A, using Phospho-MEF2A (Ser408) Antibody.



IHC (Immunohistochemistry)

AAA321347 at 1/100 staining Human gastric tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL INFORMATION

Related Product Information for anti-MEF2A antibody

Function: Transcriptional activator which binds specifically to the MEF2 element, 5'-YTA[AT]4TAR-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.

Subunit Structure: Binds DNA as a homo-or heterodimer. Dimerizes with MEF2D. Interacts with HDAC7 (By similarity). Interacts with PIAS1; the interaction enhances sumoylation. Interacts with HDAC4, HDAC9 and SLC2A4RG. Interacts (via the N-terminal) with MAPK7; the interaction results in the phosphorylation and transcriptional activity of MEF2A.

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 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). 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.

Similarity: Belongs to the MEF2 family.

NCBI AND UNIPROT INFORMATION

NCBI GI #	195972803
NCBI GeneID	4205
NCBI Accession #	NP_001124399.1
NCBI GenBank Nucleotide #	NM_001130927.2
UniProt Accession #	Q02078; O43814; Q14223; Q14224; Q59GX4; Q7Z6C9; Q96D14; B4DFQ7; F6XG23

Molecular Weight	Observed: 54 kDa Predicted: 55 kDa
NCBI Official Full Name	myocyte-specific enhancer factor 2A isoform 3
NCBI Official Synonym Full Names	myocyte enhancer factor 2A
NCBI Official Symbol	MEF2A
NCBI Official Synonym Symbols	mef2; ADCAD1; RSRFC4; RSRFC9
NCBI Protein Information	myocyte-specific enhancer factor 2A
UniProt Protein Name	Myocyte-specific enhancer factor 2A
UniProt Gene Name	MEF2A
UniProt Synonym Gene Names	MEF2

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: <https://stage.aaabiotech.com/polyclonal/mef2a-antibody-immunohistochemistry-western-blot-elisa/321347>