abcam

Product datasheet

Anti-MEF2A antibody [EP1706Y] ab76063

重组 RabMAb

★★★★★ 2 Abreviews 7 References 7 图像

概述

产品名称	Anti-MEF2A抗体[EP1706Y]
描述	兔单克隆抗体[EP1706Y] to MEF2A
宿主	Rabbit
经测试应用	**适用于:** Flow Cyt (Intra), WB, ICC/IF
种属反应性	**与反应:** Mouse, Rat, Human
免疫原	Synthetic peptide within Human MEF2A aa 400-500. The exact sequence is proprietary.
阳性对照	WB: Fetal brain, human heart, 3T3-L1, Mouse brain lysates, Rat brain and HeLa lysates. ICC/IF: MCF7 cells Flow Cyt (intra): MCF7 cells lysates
常规说明	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

性能

形式	Liquid
存放说明	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.
存储溶液	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 0.05% BSA, 40% Glycerol, 59% PBS
纯度	Protein A purified
克隆	单克隆
克隆编号	EP1706Y
同种型	IgG

应用

The Abpromise guarantee **Abpromise™承诺保证使用ab76063于以下的经测试应用**

"应用说明"部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
Flow Cyt (Intra)		1/20 - 1/50. **ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
WB	★★★★★ (2)	1/1000 - 1/10000. Predicted molecular weight: 55 kDa.
ICC/IF		1/100 - 1/250.

靶标

功能

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.

组织特异性

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.

疾病相关

Defects in MEF2A might be a cause of autosomal dominant coronary artery disease 1 with myocardial infarction (ADCAD1) [MIM:608320].

序列相似性

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

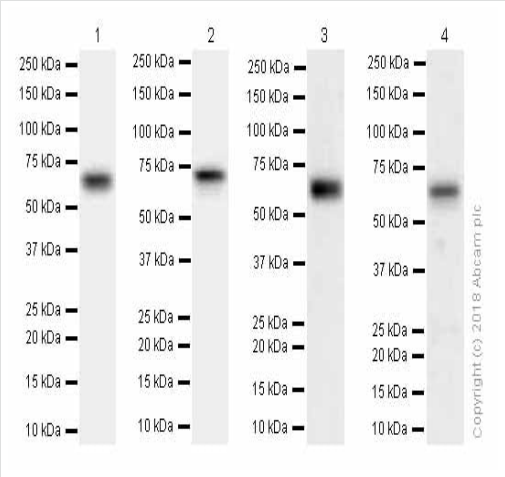
翻译后修饰

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 diffentiating 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.

细胞定位 Nucleus.

图片



Western blot - Anti-MEF2A antibody [EP1706Y] (ab76063)

All lanes : Anti-MEF2A antibody [EP1706Y] (ab76063) at 0.2 µg/ml (purified)

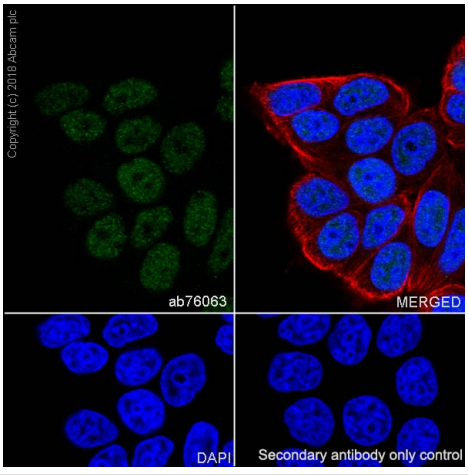
Lane 1 : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates
Lane 2 : 3T3-L1 (Mouse embryonic fibroblast) whole cell lysates
Lane 3 : Mouse brain lysates
Lane 4 : Rat brain lysates

Lysates/proteins at 15 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 55 kDa
Observed band size: 66 kDa

Blocking and diluting buffer: 5% NFDM/TBST.

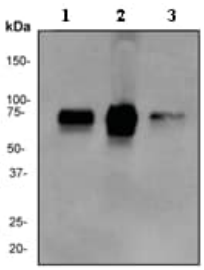


Immunocytochemistry/ Immunofluorescence - Anti-MEF2A antibody [EP1706Y] (ab76063)

Immunocytochemistry/ Immunofluorescence analysis of MCF7 (Human breast adenocarcinoma epithelial cell) cells labeling MEF2A with Purified ab76063 at 1:100 dilution (4.3 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor®594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor®488, **ab150077**) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.

Flow Cytometry (Intracellular) - Anti-MEF2A antibody [EP1706Y] (ab76063)

Overlay histogram showing MCF-7 cells stained with unpurified ab76063 (red line). The cells were fixed with methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab76063, 1/50 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (**ab96899**) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit monoclonal IgG (1µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in MCF-7 cells fixed with 4% paraformaldehyde (10 min)/permeabilized in 0.1% PBS-Tween used under the same conditions.



Western blot - Anti-MEF2A antibody [EP1706Y] (ab76063)

All lanes : Anti-MEF2A antibody [EP1706Y] (ab76063) at 1/10000 dilution (Unpurified)

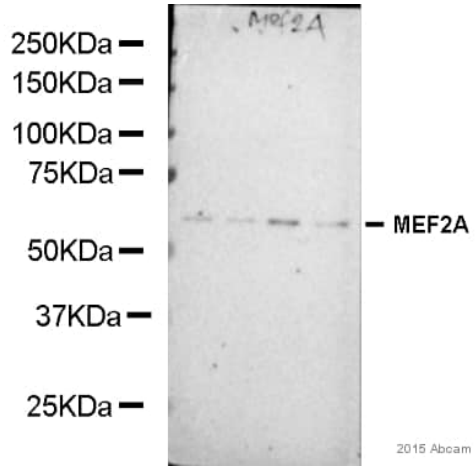
Lane 1 : Fetal brain lysate
Lane 2 : Human heart lysate
Lane 3 : HeLa lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 55 kDa
Observed band size: 70 kDa

The observed band size may be different from the predicted molecular weight as the protein is sumoylated.



Western blot - Anti-MEF2A antibody [EP1706Y] (ab76063)

Image is courtesy of an anonymous AbReview.

All lanes : Anti-MEF2A antibody [EP1706Y] (ab76063) at 1/1000 dilution (Unpurified)

All lanes : Murine cardiomyocyte whole cell lysate

Lysates/proteins at 25 µg per lane.

Secondary

All lanes : Goat anti-rabbit polyclonal HRP conjugate.

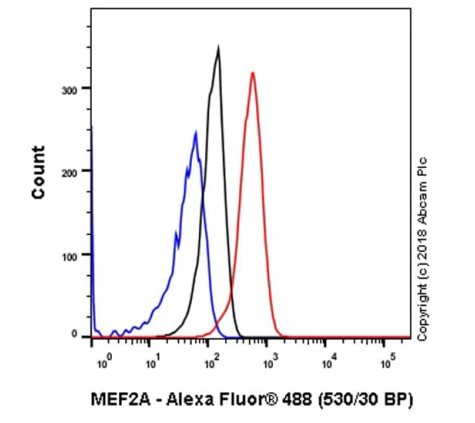
Performed under reducing conditions.

Predicted band size: 55 kDa

Exposure time: 30 seconds

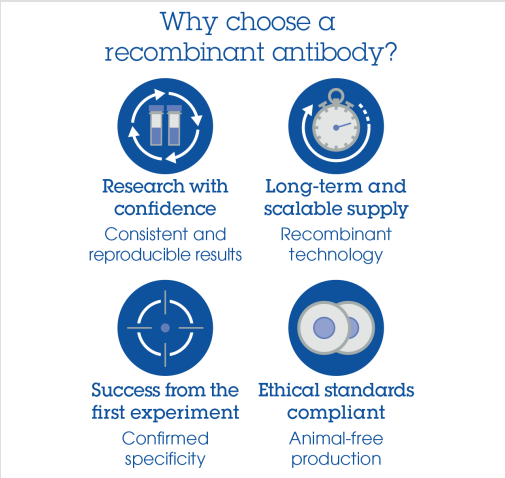
Lanes from left to right: cropped MW marker ladder, 1, 2, 3, 4.

Blocking was performed with 5% milk for 1 hour at room temperature.



Flow Cytometry (Intracellular) - Anti-MEF2A antibody [EP1706Y] (ab76063)

Intracellular Flow Cytometry analysis of MCF7 (Human breast adenocarcinoma epithelial cell) cells labeling MEF2A with purified ab76063 at 1/40 dilution (10 µg/ml) (red). Cells were fixed with 4% Paraformaldehyde. A Goat anti rabbit IgG (Alexa Fluor® 488) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Anti-MEF2A antibody [EP1706Y] (ab76063)

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