abcam

Product datasheet

Anti-MEF2A (phospho T312) antibody ab30644

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概述

产品名称	Anti-MEF2A (phospho T312)**抗体**
描述	**兔多克隆抗体**to MEF2A (phospho T312)
宿主	Rabbit
经测试应用	**适用于:** IHC-P, WB
种属反应性	**与反应:** Mouse, Human
免疫原	Synthetic peptide corresponding to Human MEF2A (phospho T312).
常规说明	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. 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

性能

形式	Liquid
存放说明	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
存储溶液	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: PBS, 50% Glycerol, 0.87% Sodium chloride Without Mg2+ and Ca2+
纯度	Immunogen affinity purified
纯化说明	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific phosphopeptide. The antibody against non-phosphopeptide was removed by chromatography using non-phosphopeptide corresponding to the phosphorylation site.
克隆	**多克隆**
同种型	IgG

应用

The Abpromise guarantee **Abpromise™承诺保证使用ab30644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
IHC-P		1/50 - 1/100.
WB	★★★★★ (1)	1/500 - 1/1000. Detects a band of approximately 65 kDa (predicted molecular weight: 55 kDa).

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.

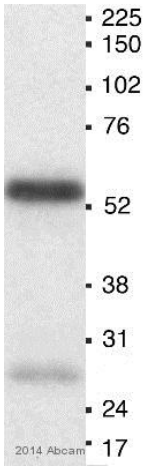
疾病相关 Defects in MEF2A might be a cause of autosomal dominant coronary artery disease 1 with myocardial infarction (ADCAD1) [MIM:608320].

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 (phospho T312) antibody (ab30644)

This image is courtesy of an anonymous Abreview

Anti-MEF2A (phospho T312) antibody (ab30644) at 1/1000 dilution + Mouse liver tissue lysate - whole at 40 µg

Secondary

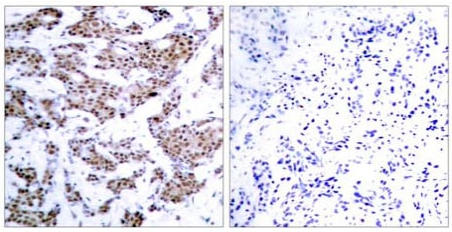
HRP-conjugated goat anti-rabbit IgG polyclonal at 1/10000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

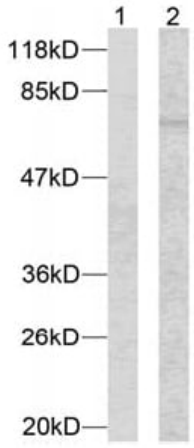
Predicted band size: 55 kDa
Observed band size: 55 kDa

Exposure time: 1 minute



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MEF2A (phospho T312) antibody (ab30644)

Immunohistochemical analysis of paraffin-embedded human breast carcinoma. Left: using ab30644 (10ug/ml); right: the same antibody preincubated with synthesized phosphopeptide.



Western blot - Anti-MEF2A (phospho T312) antibody (ab30644)

All lanes : Anti-MEF2A (phospho T312) antibody (ab30644) at 1 µg/ml

Lane 1 : Untreated NIH/3T3 cells (5-30ug).
Lane 2 : NIH/3T3 cells treated with PMA (5-30ug)

Predicted band size: 55 kDa
Observed band size: 65 kDa

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