

### Anti-MEF2D antibody ab32845

★★★★★ [2 Abreviews](#) [15 References](#) [2 Images](#)

#### Overview

<b>Product name</b>	Anti-MEF2D antibody
<b>Description</b>	Rabbit polyclonal to MEF2D
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> IP, IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Recombinant fragment, corresponding to amino acids 292-514 of Human MEF2D
<b>General notes</b>	<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&amp;As</p>

#### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	Constituent: Whole serum
<b>Purity</b>	Whole antiserum
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

#### Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab32845 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
IP		Use at an assay dependent concentration. Use 4µl for 1ml cell lysate.
IHC-P	★★★★★ (1)	Use a concentration of 2 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

## Target

### Function

Transcriptional activator which binds specifically to the MEF2 element, 5'-YTA[AT](4)TAR-3', found in numerous muscle-specific, 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. Plays a critical role in the regulation of neuronal apoptosis.

### Sequence similarities

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

### Developmental stage

Present in myotubes and also in undifferentiated myoblasts.

### Domain

The beta domain, missing in a number of isoforms, is required for enhancement of transcriptional activity.

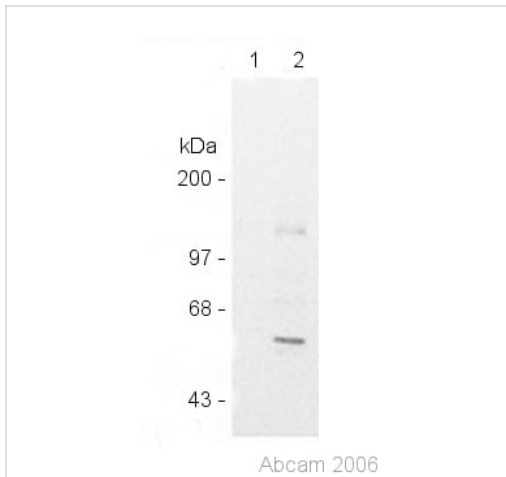
### Post-translational modifications

Phosphorylated on Ser-444 by CDK5 is required for Lys-439 sumoylation and inhibits transcriptional activity. In neurons, enhanced CDK5 activity induced by neurotoxins promotes caspase 3-mediated cleavage leading to neuron apoptosis. Phosphorylation on Ser-180 can be enhanced by EGF.  
Acetylated on Lys-439 by CREBBP. Deacetylated by SIRT1.  
Sumoylated on Lys-439 by SUMO2 but not SUMO1; which inhibits transcriptional activity and myogenic activity. Desumoylated by SENP3.  
Proteolytically cleaved in cerebellar granule neurons on several sites by caspase 7 following neurotoxicity. Preferentially cleaves the CDK5-mediated hyperphosphorylated form which leads to neuron apoptosis and transcriptional inactivation.

### Cellular localization

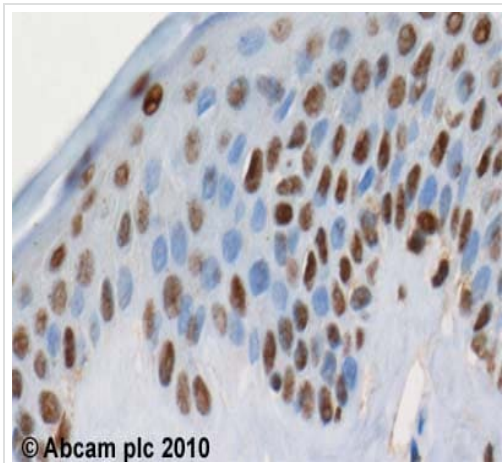
Nucleus. Translocated by HDAC4 to nuclear dots.

## Images



Immunoprecipitation - Anti-MEF2D antibody  
(ab32845)

Immunoprecipitation of <sup>35</sup>S-methionine labelled HeLa cells with anti-MEF2D sera. 1: pre-immune sera; 2: ab32845 anti-MEF2D sera.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MEF2D antibody  
(ab32845)

ab32845 (2µg/ml) staining MEF2D in human skin using an automated system (DAKO Autostainer Plus). Using this protocol there is strong nuclear staining.

Sections were rehydrated and antigen retrieved with the Dako 3 in 1 AR buffers citrate pH6.1 in a DAKO PT link. Slides were peroxidase blocked in 3% H<sub>2</sub>O<sub>2</sub> in methanol for 10 mins. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS) then incubated with primary antibody for 20 min and detected with Dako envision flex amplification kit for 30 minutes. Colorimetric detection was completed with Diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX. Please note that, for manual staining, optimization of primary antibody concentration and incubation time is recommended. Signal amplification may be required.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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