abcam

Product datasheet

Anti-MyoD1 antibody [EPR6653-131] ab133627

Recombinant RabMAb

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Overview

Product name	Anti-MyoD1 antibody [EPR6653-131]
Description	Rabbit monoclonal [EPR6653-131] to MyoD1
Host species	Rabbit
Tested applications	**Suitable for:** ChIC/CUT&RUN-seq, WB, ICC/IF, IHC-P
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide corresponding to Human MyoD1 aa 50-150. Database link: **P15172**
Positive control	IHC-P: Human Rhabdomyosarcoma tissue WB: Human Rhabdomyosarcoma Cell Line Rh30, RD (Human muscle rhabdomyosarcoma) whole cell lysate ICC/IF: RD (Human muscle rhabdomyosarcoma) cell line. ChIC/CUT&RUN-Seq: RD (Human muscle rhabdomyosarcoma) cells.
General notes	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**. Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified

Clonality	Monoclonal
Clone number	EPR6653-131
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab133627 in the following tested applications.

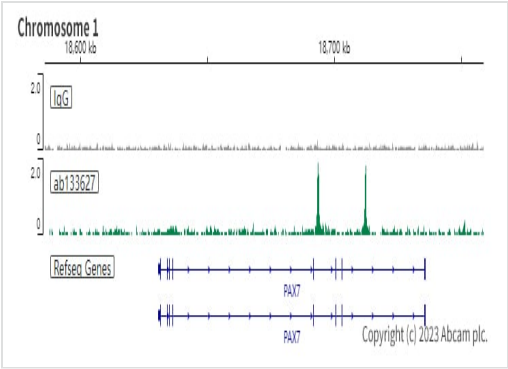
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ChIC/CUT&RUN-seq		Use at an assay dependent concentration. 5µg
WB		1/1000. Detects a band of approximately 45 kDa (predicted molecular weight: 34 kDa). Abcam recommends using milk as the blocking agent.
ICC/IF	★★★★★ (1)	1/100.
IHC-P	★★★★☆ (5)	1/250 - 1/500. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Target

Function	Involved in muscle differentiation (myogenic factor). Induces fibroblasts to differentiate into myoblasts. Activates muscle-specific promoters. Interacts with and is inhibited by the twist protein. This interaction probably involves the basic domains of both proteins.
Sequence similarities	Contains 1 basic helix-loop-helix (bHLH) domain.
Post-translational modifications	Acetylated by a complex containing EP300 and PCAF. The acetylation is essential to activate target genes. Conversely, its deacetylation by SIRT1 inhibits its function. Ubiquitinated on the N-terminus; which is required for proteasomal degradation.
Cellular localization	Nucleus.

Images

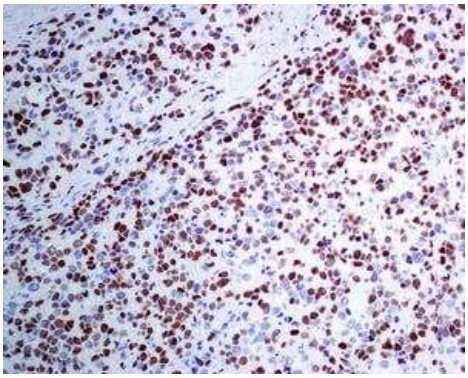


ChIC/CUT&RUN sequencing - Anti-MyoD1 antibody [EPR6653-131] (ab133627)

ChIC/CUT&RUN was performed using a pAG-MNAse at a final concentration of 700 ng/mL, 2.5 x 10^5 RD (Human muscle rhabdomyosarcoma) cells and 5µg of ab133627 [EPR6653-131]. The resulting DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 10 million reads. The negative IgG control **ab172730** is also shown.

Additional screenshots of mapped reads can be downloaded **here**.

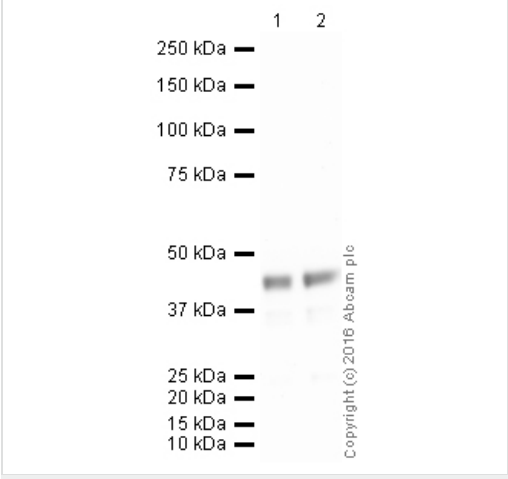
The University of Geneva owns patents relevant to ChIC (Chromatin Immuno-Cleavage) methods.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MyoD1 antibody [EPR6653-131] (ab133627)

Immunohistochemical analysis of MyoD1 in paraffin embedded Human rhabdomyosarcoma tissue, using ab133627 at a dilution of 1/250.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Western blot - Anti-MyoD1 antibody [EPR6653-131] (ab133627)

All lanes : Anti-MyoD1 antibody [EPR6653-131] (ab133627) at 1/1000 dilution

Lane 1 : Rh30 (Human Rhabdomyosarcoma) Whole Cell Lysate at 5 µg
Lane 2 : Rh30 (Human Rhabdomyosarcoma) Whole Cell Lysate at 10 µg

Secondary
All lanes : Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/50000 dilution

Developed using the ECL technique.

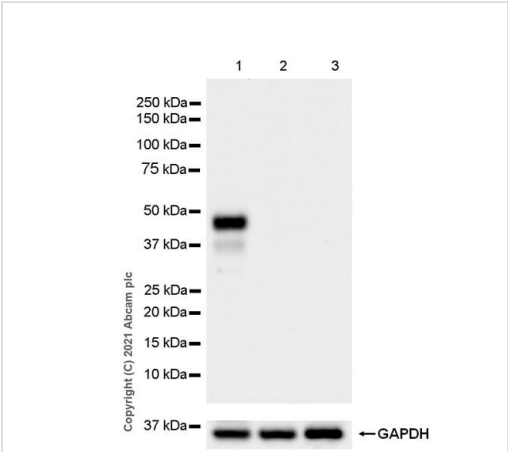
Performed under reducing conditions.

Predicted band size: 34 kDa
Observed band size: 45 kDa

Exposure time: 4 minutes

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 3% Milk before being incubated with ab133627 overnight at 4°C. Antibody binding was detected using an anti-rabbit antibody conjugated to HRP, and visualised using ECL development solution **ab133406**.

ab133627 detects a band at 45 kDa, while this differs to its predicted molecular weight of 34 kDa, the banding pattern observed is consistent with what has been described in the literature PMID:19352326.



Western blot - Anti-MyoD1 antibody [EPR6653-131] (ab133627)

All lanes : Anti-MyoD1 antibody [EPR6653-131] (ab133627) at 1/1000 dilution

Lane 1 : RD (Human muscle rhabdomyosarcoma) whole cell lysate
Lane 2 : HEK-293 (human embryonic kidney epithelial cell) whole cell lysate
Lane 3 : HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate

Lysates/proteins at 20 µg per lane.

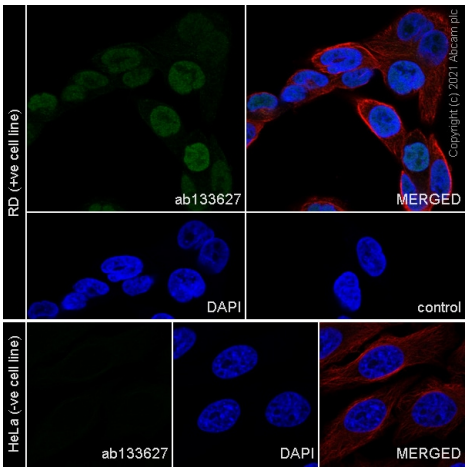
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 34 kDa
Observed band size: 45 kDa

Exposure time: 37 seconds

Blocking and diluting buffer: 5% NFDM/TBST

Negative control: HEK-293, HeLa (PMID: 17028574)



Immunocytochemistry/ Immunofluorescence - Anti-MyoD1 antibody [EPR6653-131] (ab133627)

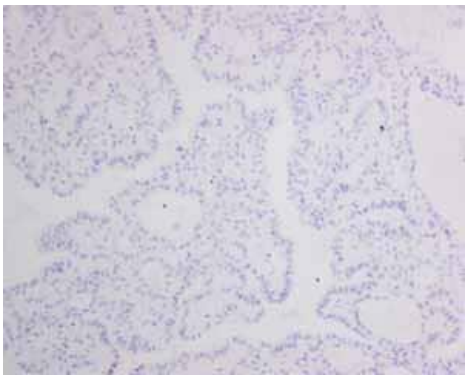
Immunocytochemical analysis of 4% paraformaldehyde fixed, 0.1% TritonX-100 permeabilised RD cell line labeling MyoD1 with ab133627 at 1/100 diltuon. **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) was used as a secondary antibody at 1/1000 dilution. Counterstained with **ab195889** Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594). Nuclear staining: DAPI.

Confocal image showing nuclear staining in RD cell line
Negative control: HeLa (PMID: 17028574 □

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MyoD1 antibody [EPR6653-131] (ab133627)

ab133627 showing negative staining in Normal heart tissue.

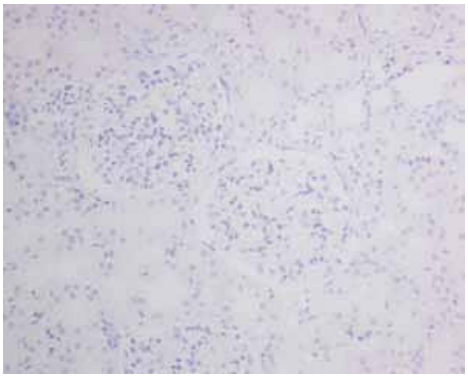
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MyoD1 antibody [EPR6653-131] (ab133627)

ab133627 showing negative staining in Thyroid gland carcinoma tissue.

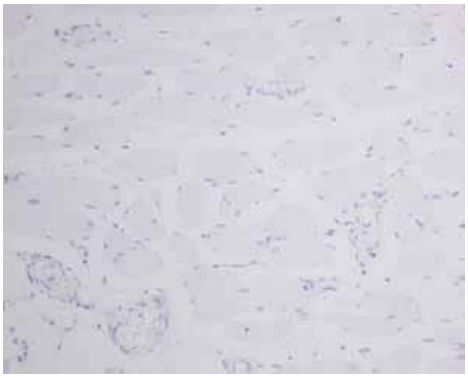
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MyoD1 antibody [EPR6653-131] (ab133627)

ab133627 showing negative staining in Normal kidney tissue.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MyoD1 antibody [EPR6653-131] (ab133627)

ab133627 showing negative staining in Skeletal muscle tissue.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Anti-MyoD1 antibody [EPR6653-131] (ab133627)

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