

Product datasheet

Anti-NeuroD1 antibody [EPR17084] ab205300

Recombinant **RabMAb**

[5 References](#) [10 Images](#)

Overview

Product name	Anti-NeuroD1 antibody [EPR17084]
Description	Rabbit monoclonal [EPR17084] to NeuroD1
Host species	Rabbit
Tested applications	Suitable for: WB, ICC/IF, IHC-Fr
Species reactivity	Reacts with: Mouse, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Human cerebellum lysate; Y79 whole cell lysate. ICC/IF: SH-SY5Y, Y79 and mouse primary neural/glia cells. IHC-Fr: Frozen mouse brain tissue sections and mouse hippocampus.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	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.
Storage buffer	<p>pH: 7.20</p> <p>Preservative: 0.01% Sodium azide</p> <p>Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA</p>
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR17084
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab205300 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
WB		1/1000. Detects a band of approximately 47 kDa (predicted molecular weight: 40 kDa).
ICC/IF		1/100 - 1/250.
IHC-Fr		Use a concentration of 10 µg/ml.

Target

Function

Differentiation factor required for dendrite morphogenesis and maintenance in the cerebellar cortex. Transcriptional activator. Binds to the insulin gene E-box.

Involvement in disease

Defects in NEUROD1 are the cause of maturity-onset diabetes of the young type 6 (MODY6) [MIM:606394]. MODY is a form of diabetes that is characterized by an autosomal dominant mode of inheritance, onset in childhood or early adulthood (usually before 25 years of age), a primary defect in insulin secretion and frequent insulin-independence at the beginning of the disease.

Sequence similarities

Contains 1 basic helix-loop-helix (bHLH) domain.

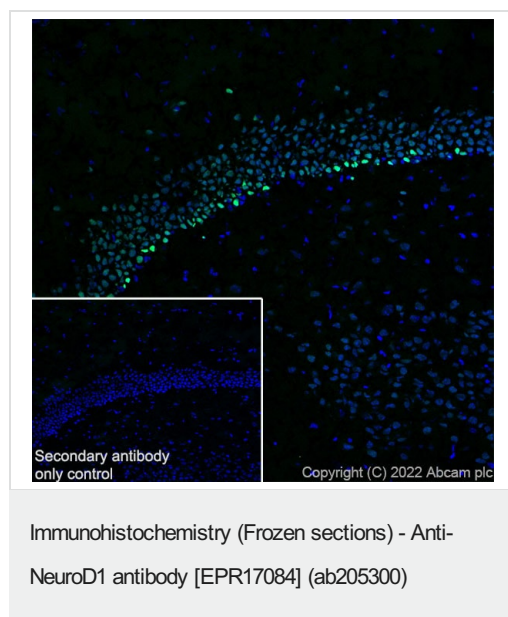
Post-translational modifications

Phosphorylated. In islet cells, phosphorylated on Ser-274 upon glucose stimulation; which may be required for nuclear localization. In activated neurons, phosphorylated on Ser-335; which promotes dendritic growth.

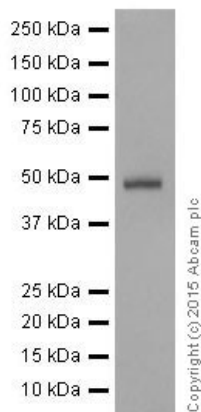
Cellular localization

Cytoplasm. Nucleus.

Images



Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized fresh Mouse hippocampus tissue labelling NeuroD1 with ab205300 at 1/50 dilution followed by **ab150081** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed secondary at 1/1000 dilution. Positive staining on mouse hippocampus tissue is observed. The nuclear counterstain was DAPI (Blue).



Western blot - Anti-NeuroD1 antibody [EPR17084] (ab205300)

Anti-NeuroD1 antibody [EPR17084] (ab205300) at 1/5000 dilution + Y79 (Human retinoblastoma cell line) whole cell lysate at 10 µg

Secondary

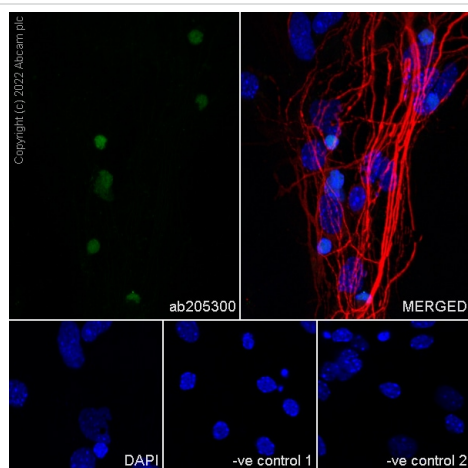
Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/1000 dilution

Predicted band size: 40 kDa

Observed band size: 47 kDa

Exposure time: 3 minutes

Blocking/Dilution buffer: 5% NFDm/TBST.



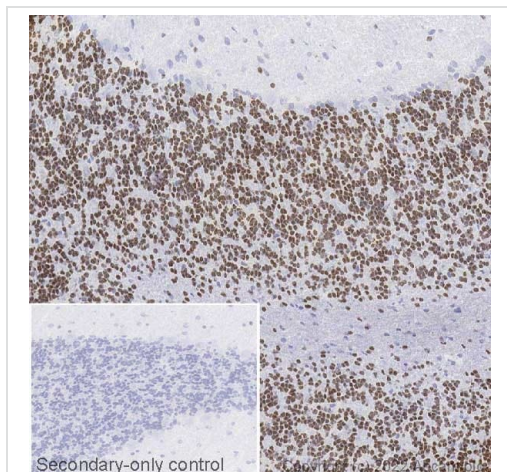
Immunocytochemistry/ Immunofluorescence - Anti-NeuroD1 antibody [EPR17084] (ab205300)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized mouse primary neural/glia cells labelling NeuroD1 with primary antibody anti-NeuroD1 (ab205300) at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed ([ab150081](#)) secondary antibody at 1/1000 dilution. Confocal image showing nuclear staining in part of mouse primary neuron. Confocal scanning Z step was set as 0.3 µm followed by image processing with maximum Z projection. Anti-MAP2 mouse monoclonal antibody ([ab11267](#)) was used to counterstain at 1/500 dilution, followed by Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) ([ab150120](#)) as a secondary counterstain antibody at 1/1000 dilution. The nuclear counter stain is DAPI (blue).

The negative controls are as follows:-

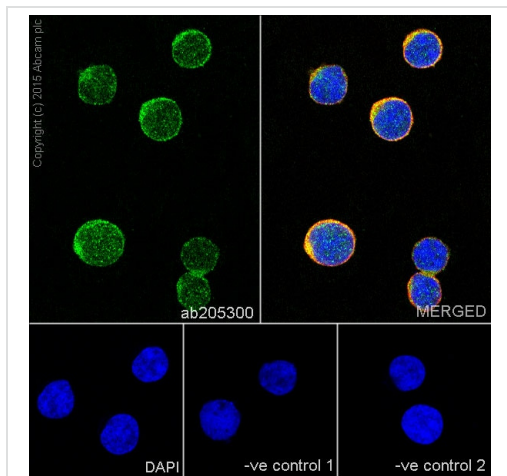
Negative control 1: ab205300 at 1/100 dilution followed by [ab150120](#) Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) at 1/1000 dilution.

Negative control 2: [ab11267](#) Anti-MAP2 mouse monoclonal antibody at 1/500 dilution followed by [ab150081](#) Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution.



Immunohistochemistry (Frozen sections) - Anti-NeuroD1 antibody [EPR17084] (ab205300)

IHC image of NeuroD1 staining in a section of frozen normal mouse brain performed on a Leica Biosystems BOND® RX instrument. The section was fixed in 10% paraformaldehyde (10 min) prior to staining. The section was incubated with ab205300, 10 ug/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody. For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



Immunocytochemistry/ Immunofluorescence - Anti-NeuroD1 antibody [EPR17084] (ab205300)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized Y79 (Human retinoblastoma cell line) cells labeling NeuroD1 with ab205300 at 1/250 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green).

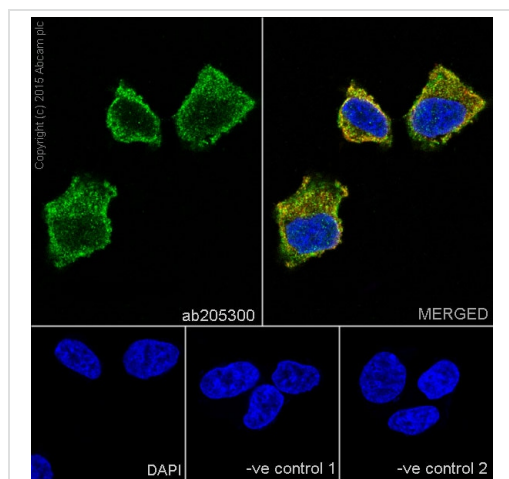
Confocal image showing cytoplasmic and nuclear staining on Y79 cell line.

The nuclear counterstain is DAPI (blue).

Tubulin is detected with **ab7291** (anti-Tubulin mouse mAb) at 1/1000 dilution and **ab150120** (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution (red).

The negative controls are as follows:-

- ve control 1: ab205300 at 1/250 dilution followed by **ab150120** (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution.
- ve control 2: **ab7291** (anti-Tubulin mouse mAb) at 1/1000 dilution followed by **ab150077** (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/1000 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-NeuroD1 antibody [EPR17084] (ab205300)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized SH-SY5Y (Human neuroblastoma from bone marrow cells) cells labeling NeuroD1 with ab205300 at 1/250 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green).

Confocal image showing cytoplasmic and nuclear staining on SH-SY5Y cell line.

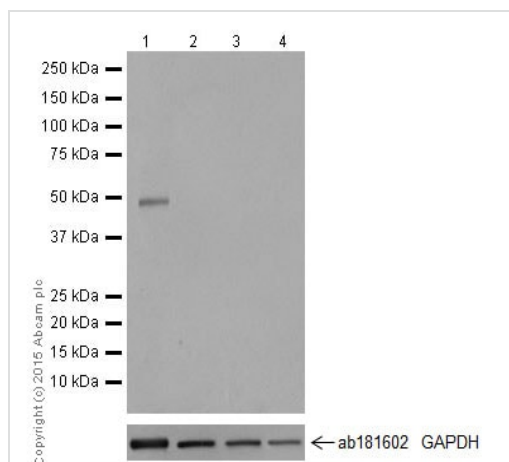
The nuclear counterstain is DAPI (blue).

Tubulin is detected with **ab7291** (anti-Tubulin mouse mAb) at 1/1000 dilution and **ab150120** (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution (red).

The negative controls are as follows:-

-ve control 1: ab205300 at 1/250 dilution followed by **ab150120** (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution.

-ve control 2: **ab7291** (anti-Tubulin mouse mAb) at 1/1000 dilution followed by **ab150077** (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/1000 dilution.



Western blot - Anti-NeuroD1 antibody [EPR17084] (ab205300)

All lanes : Anti-NeuroD1 antibody [EPR17084] (ab205300) at 1/1000 dilution

Lane 1 : Human cerebellum lysate

Lane 2 : Human fetal heart lysate

Lane 3 : Human fetal kidney lysate

Lane 4 : Human fetal spleen lysate

Lysates/proteins at 10 µg per lane.

Secondary

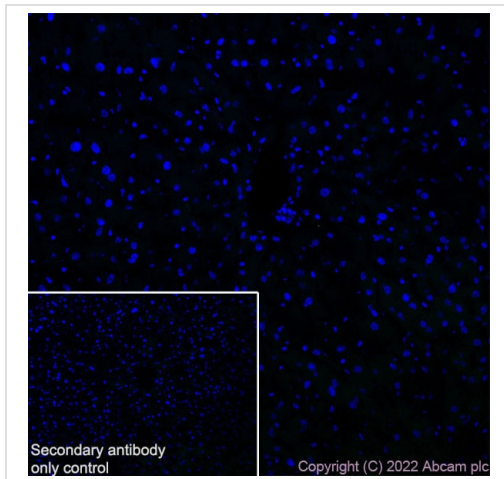
All lanes : Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 40 kDa

Observed band size: 47 kDa

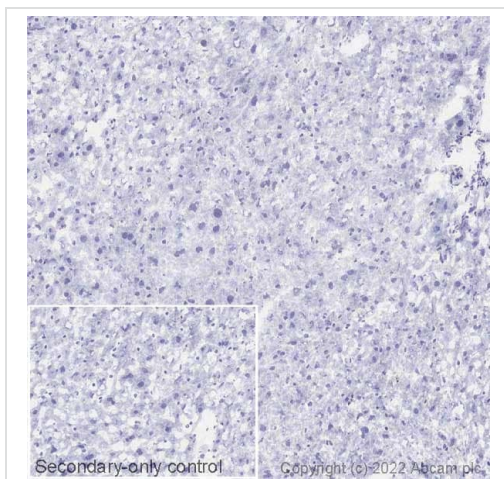
Exposure time: 3 minutes

Blocking/Dilution buffer: 5% NFDM/TBST.



Immunohistochemistry (Frozen sections) - Anti-NeuroD1 antibody [EPR17084] (ab205300)

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized fresh Mouse liver tissue labelling NeuroD1 with ab205300 at 1/50 dilution followed by **ab150081** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed secondary at 1/1000 dilution. No staining on mouse liver tissue is observed. The nuclear counterstain was DAPI (Blue). Negative control (PMID: 24309898).



Immunohistochemistry (Frozen sections) - Anti-NeuroD1 antibody [EPR17084] (ab205300)

Negative tissue image: IHC image of NeuroD1 staining in a section of frozen normal mouse liver performed on a Leica Biosystems BOND® RX instrument. The section was fixed in 10% paraformaldehyde (10 min) prior to staining. The section was incubated with ab205300, 10 ug/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

Why choose a recombinant antibody?

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

Anti-NeuroD1 antibody [EPR17084] (ab205300)

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