abcam

Product datasheet

Anti-NeuroD1 antibody [EPR20766] ab213725

Recombinant RabMAb

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Overview

Product name	Anti-NeuroD1 antibody [EPR20766]
Description	Rabbit monoclonal [EPR20766] to NeuroD1
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P, Flow Cyt, IP
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Y79 whole cell lysate; rat retina tissue lysate and mouse P3 (postnatal day 3) retina tissue lysate. IP: Y79 whole cell lysate. IHC-P: Mouse hippocampus tissue; rat hippocampus tissue. Flow cytometry: Y97 cells.
General notes	The Human species recommendation is based on the WB results. We do not guarantee IHC-P for Human. 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.

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	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 0.05% BSA, 40% Glycerol, PBS
Purity	Protein A purified
Clonality	Monoclonal

Clone number	EPR20766
Isotype	IgG

Applications

The Abpromise guarantee Our Abpromise guarantee covers the use of ab213725 in the following tested applications.

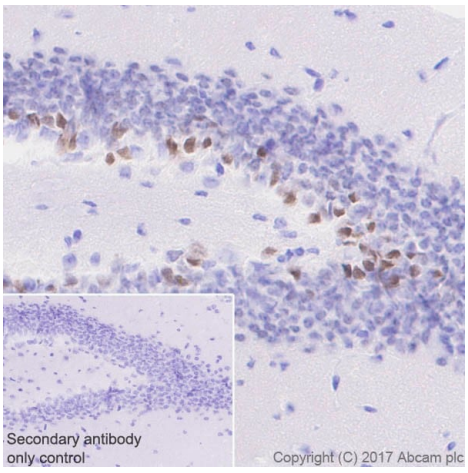
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000. Detects a band of approximately 39 kDa (predicted molecular weight: 40 kDa).
IHC-P		1/1000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. The Human species recommendation is based on the WB results. We do not guarantee IHC-P for Human.
Flow Cyt		1/50.
IP		1/30.

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

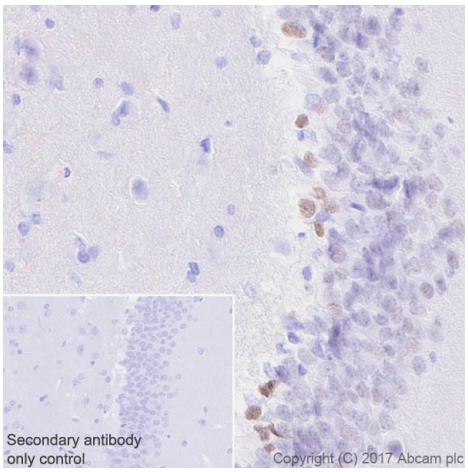


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NeuroD1 antibody [EPR20766] (ab213725)

Immunohistochemical analysis of paraffin-embedded mouse hippocampus tissue labeling NeuroD1 with ab213725 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Nuclear staining on subgranular zone of the mouse hippocampus dentate gyrus (PMID: 19701197, PMID: 25825708) is observed. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

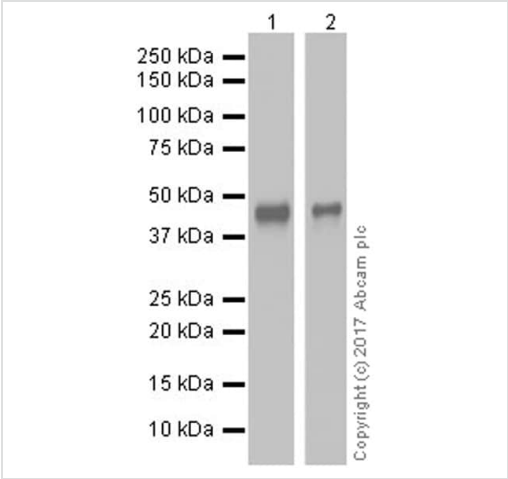


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NeuroD1 antibody [EPR20766] (ab213725)

Immunohistochemical analysis of paraffin-embedded rat hippocampus tissue labeling NeuroD1 with ab213725 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Nuclear staining on subgranular zone of the rat hippocampus (PMID: 19701197, PMID: 25825708) is observed. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-NeuroD1 antibody [EPR20766] (ab213725)

All lanes : Anti-NeuroD1 antibody [EPR20766] (ab213725) at 1/1000 dilution

Lane 1 : Y79 (human retinoblastoma cell line) whole cell lysate
Lane 2 : Mouse P3 (postnatal day 3) retina lysate

Lysates/proteins at 20 µg per lane.

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

Developed using the ECL technique.

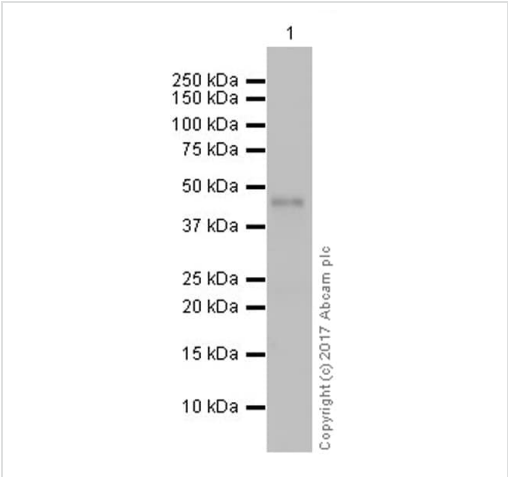
Predicted band size: 40 kDa
Observed band size: 39 kDa

Blocking/dilution buffer: 5% NFDM/TBST

Exposure times.

Lane 1: 10 seconds

Lane 2: 30 seconds



Western blot - Anti-NeuroD1 antibody [EPR20766] (ab213725)

Anti-NeuroD1 antibody [EPR20766] (ab213725) at 1000 cells + Rat retina tissue lysate at 20 µg

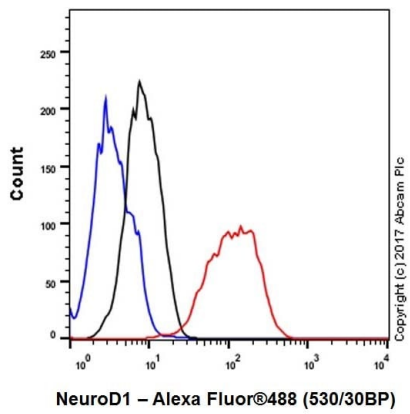
Secondary
Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Developed using the ECL technique.

Predicted band size: 40 kDa
Observed band size: 39 kDa

Exposure time: 3 minutes

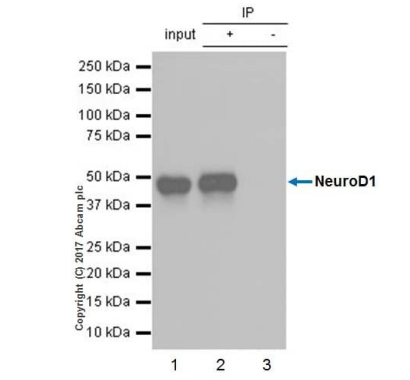
Blocking/dilution buffer: 5% NFDM/TBST



Flow Cytometry (Intracellular) - Anti-NeuroD1 antibody [EPR20766] (ab213725)

Flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized Y79 (human retinoblastoma cell line) cell line labeling NeuroD1 with ab213725 at 1/50 (red) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype control details (ab172730) (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (blue).

Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077), at 1/2000 dilution was used as the secondary antibody.



Immunoprecipitation - Anti-NeuroD1 antibody [EPR20766] (ab213725)

NeuroD1 was immunoprecipitated from 0.35 mg of Y79 (human retinoblastoma cell line) whole cell lysate with ab213725 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab213725 at 1/500 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/1,000 dilution

Lane 1: Y79 whole cell lysate 10 µg (Input).
Lane 2: ab213725 IP in Y79 whole cell lysate.
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab213725 in Y79 whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 1 second.

Anti-NeuroD1 antibody [EPR20766] (ab213725)

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