


Product datasheet

Anti-Neurogranin antibody [EPR21152] ab217672

Recombinant RabMAb

★★★★★ [3 Abreviews](#) [3 References](#) [9 Images](#)

Overview

Product name	Anti-Neurogranin antibody [EPR21152]
Description	Rabbit monoclonal [EPR21152] to Neurogranin
Host species	Rabbit
Tested applications	Suitable for: IHC-Fr, WB, IHC-P, IP, ICC/IF
Species reactivity	Reacts with: Mouse, Rat, Human Predicted to work with: Common marmoset 
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Human fetal brain lysate and brain cortex lysate; mouse cerebral cortex lysate. Rat brain lysate. IHC-P: Human cerebellum tissue; mouse and rat cerebrum tissue. IHC-Fr: Mouse and rat hippocampus CA1 tissue. IP: Mouse cerebral cortex lysate. ICC/IF: Primary rat cortical neurons
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	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal

Clone number	EPR21152
Isotype	IgG

Applications

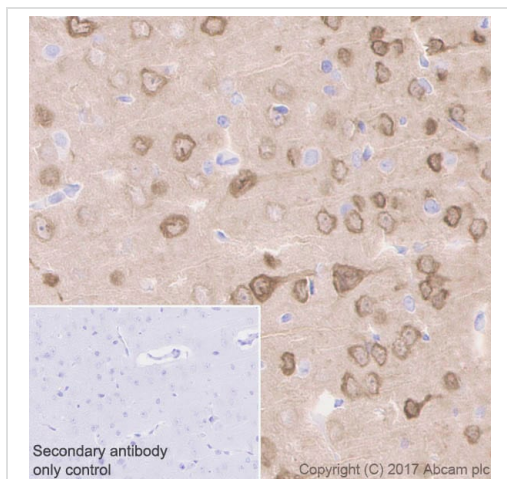
The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab217672 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-Fr		1/3000. Perform heat-mediated antigen retrieval by using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).
WB		1/1000. Detects a band of approximately 15 kDa (predicted molecular weight: 8 kDa).
IHC-P	★★★★★ (3)	1/5000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
IP		1/30.
ICC/IF		1/1500.

Target

Function	Acts as a "third messenger" substrate of protein kinase C-mediated molecular cascades during synaptic development and remodeling. Binds to calmodulin in the absence of calcium.
Tissue specificity	In the cerebral cortex, found in the cell bodies of neurons in layers II-VI, and in apical and basal dendrites of pyramidal neurons. Is not found in the dendrites in patients with Alzheimer disease.
Sequence similarities	Belongs to the neurogranin family. Contains 1 collagen-like domain. Contains 1 IQ domain.

Images

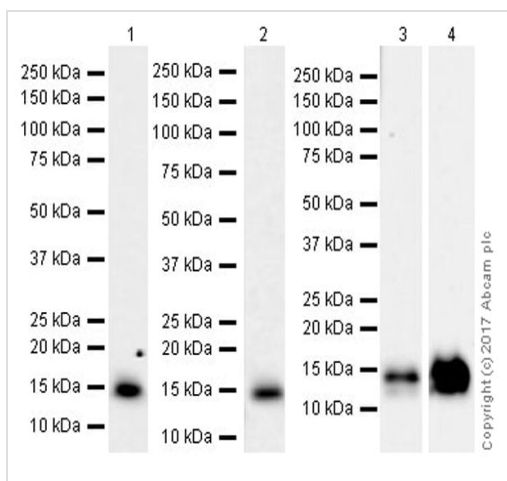


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Neurogranin antibody [EPR21152] (ab217672)

Immunohistochemical analysis of paraffin-embedded rat cerebrum tissue labeling Neurogranin with ab217672 at 1/5000 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Mainly cytoplasmic staining on rat cerebrum (PMID: 26076492) is observed. Counter stained with Hematoxylin.

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

Perform heat mediated antigen retrieval using [ab93684](#) (Tris/EDTA buffer, pH 9.0).



Western blot - Anti-Neurogranin antibody [EPR21152] (ab217672)

All lanes : Anti-Neurogranin antibody [EPR21152] (ab217672) at 1/1000 dilution

Lane 1 : Human fetal brain lysate at 10 µg

Lane 2 : Human brain cortex lysate at 10 µg

Lane 3 : Mouse cerebral cortex lysate at 20 µg

Lane 4 : Rat brain lysate at 20 µg

Secondary

Lanes 1-2 : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/50000 dilution

Lanes 3-4 : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

Developed using the ECL technique.

Predicted band size: 8 kDa

Observed band size: 15 kDa

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

Exposure times:

Lane 1: 32 seconds

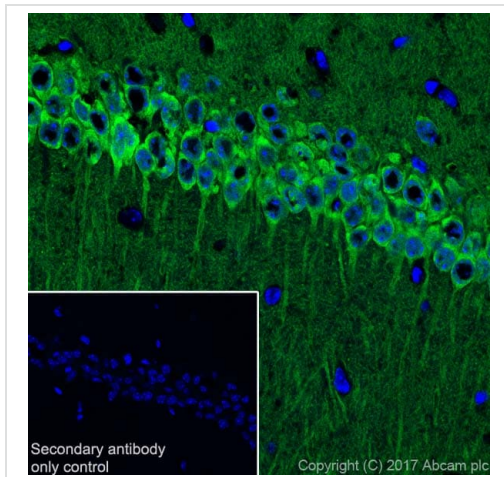
Lane 2: 101 seconds

Lane 3: 85 seconds

Lane 4: 3 minutes

The observed molecular mass is consistent with the literature (PMID 17505539).

The blot was developed on a BIO-RAD® ChemiDoc™ MP instrument.

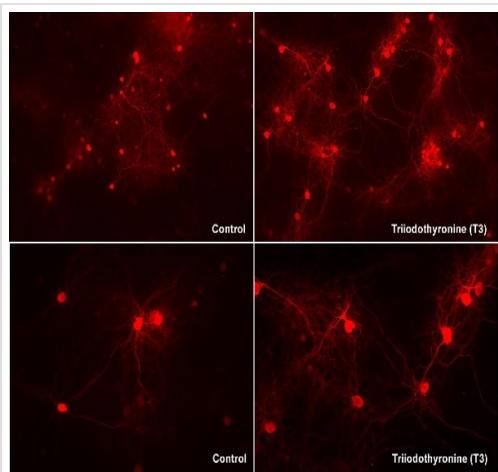


Immunohistochemistry (Frozen sections) - Anti-Neurogranin antibody [EPR21152] (ab217672)

Immunohistochemical analysis of 4% paraformaldehyde-fixed, 0.2% Triton X-100 permeabilized frozen mouse hippocampus CA1 tissue labeling Neurogranin with ab217672 at 1/3000 dilution (green), followed by **ab150077** AlexaFluor®488 Goat anti-Rabbit secondary at a 1/1000 dilution. Positive staining in the stratum pyramidal neurons of hippocampus CA1 on mouse brain (PMID: 15389631; 21516261) is observed. Counter stained with DAPI (blue).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is **ab150077** AlexaFluor®488 Goat anti-Rabbit used at a 1/1000 dilution.

Perform heat-mediated antigen retrieval by using sodium citrate buffer (10 mM citrate pH 6.0 + 0.05% Tween-20)



Immunocytochemistry/ Immunofluorescence - Anti-Neurogranin antibody [EPR21152] (ab217672)

Image courtesy of Ms. Babben Tinner, QBM Cell Science.

Immunocytochemistry/ Immunofluorescence analysis of primary rat cortical neurons labeling Neurogranin with ab217672 at 1/1500.

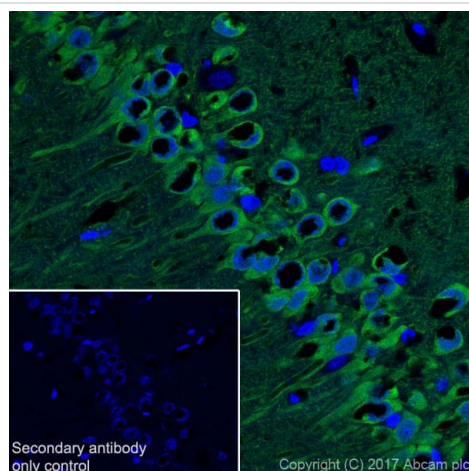
The cells were fixed with 4% paraformaldehyde containing 0.2% picric acid in 0.1M phosphate buffer, pH 6.9 for 20 minutes.

Permeabilization was with 0.3% Triton-X 100 in PBS

(PBSTx). **ab150068** at 1/200 was used as the secondary antibody

The rat cortical neurons were cultured for 29 days *in vitro*. They were either left untreated (Control) or treated beginning on the 10th day with 60ng/mL triiodothyronine (T3), to enhance neurogranin expression.

The cells were visualized with an inverted microscope at 10X magnification (upper panels) or 20X magnification (lower panels).

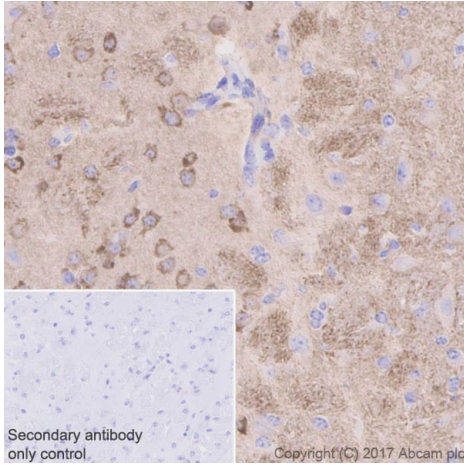


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Perform heat-mediated antigen retrieval by using sodium citrate buffer (10 mM citrate pH 6.0 + 0.05% Tween-20)

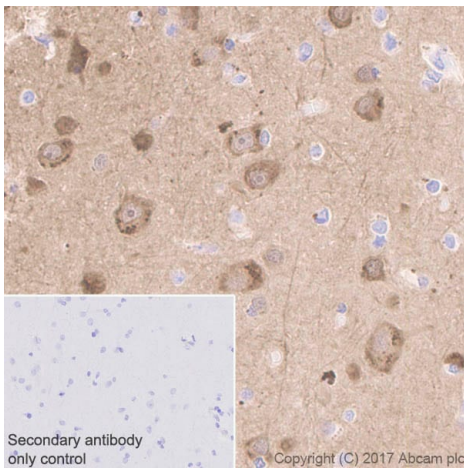


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Neurogranin antibody [EPR21152] (ab217672)

Immunohistochemical analysis of paraffin-embedded mouse cerebrum tissue labeling Neurogranin with ab217672 at 1/5000 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Mainly cytoplasmic staining on mouse cerebrum (PMID: 26076492) is observed. Counter stained with Hematoxylin.

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

Perform heat mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0).

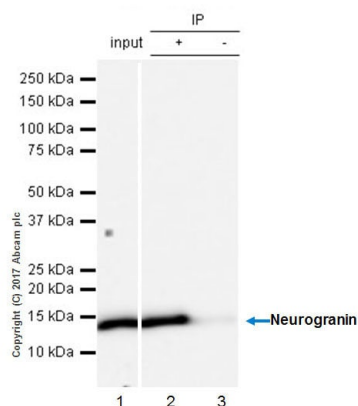


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Neurogranin antibody [EPR21152] (ab217672)

Immunohistochemical analysis of paraffin-embedded human cerebrum tissue labeling Neurogranin with ab217672 at 1/5000 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Mainly cytoplasmic but also weak nuclear staining on human cerebrum (PMID: 26076492; PMID: 21516261) is observed. Counter stained with Hematoxylin.

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

Perform heat mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0).



Immunoprecipitation - Anti-Neurogranin antibody
[EPR21152] (ab217672)

Neurogranin was immunoprecipitated from 0.35 mg mouse cerebral cortex lysate with ab217672 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab217672 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)), was used for detection at 1/5,000 dilution.

Lane 1: Mouse cerebral cortex lysate 10 µg (Input).

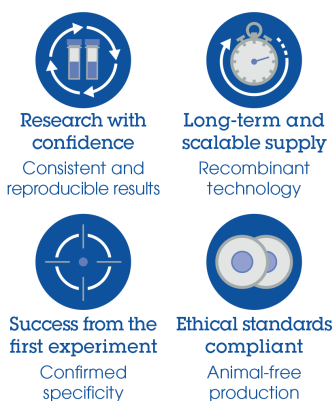
Lane 2: ab217672 IP in mouse cerebral cortex lysate (+).

Lane 3: Rabbit monoclonal IgG ([ab172730](#)) instead of ab217672 in mouse cerebral cortex lysate (-).

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

Exposure time: 15 seconds.

Why choose a recombinant antibody?



Anti-Neurogranin antibody [EPR21152] (ab217672)

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

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