abcam

ab223994

FITC Anti-NeuN antibody [EPR12763] - Neuronal Marker

Lab Essentials | Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	FITC
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR12763
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Rat
Dilution info	1/100
Notes	This product gave a positive signal in PC12 cells fixed with 100% methanol (5 min)

Expected

Species	Human
Dilution info	1/100
Notes	This product gave a positive signal in PC12 cells fixed with 100% methanol (5 min)

Predicted

Species	Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Rat
Dilution info	1/50
Notes	-

Expected

Species	Human
Dilution info	1/50
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information NeuN

Function	Pre-mRNA alternative splicing regulator. Regulates alternative splicing of RBFOX2 to enhance the production of mRNA species that are targeted for nonsense-mediated decay (NMD).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Store in the dark

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
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 batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	NeuN also known as Fox-3 or Rbfox3 serves as a vital neuronal marker and has a molecular weight of about 46-50 kDa. This nuclear protein is commonly found in neuronal cells in the central nervous system but it does not appear in glial cells. Researchers use NeuN staining as an effective tool to identify neurons in various brain regions due to its reliable expression pattern in mature neurons. The presence of NeuN can be detected using methods such as NeuN IHC (immunohistochemistry) and NeuN Western blot aiding in cellular and tissue analysis.
Biological function summary	NeuN plays an essential role in the regulation of RNA-binding influencing the splicing and stability of transcripts. It forms part of the complex network responsible for managing neuron-specific gene expression. By interacting with other RNA-binding proteins NeuN contributes to the fine-tuning needed for proper neuronal development and function. As a result NeuN helps maintain the health and activity of nerve cells allowing them to perform complex neurological tasks.
Pathways	NeuN has a significant role in neuronal differentiation and plasticity pathways. NeuN coordinates with elements of the Notch signaling pathway which is important for guiding cell fate decisions in the nervous system. It also interacts with related proteins like Fox proteins involved in splicing regulation. These pathways ensure neurons develop differentiate and function correctly within the nervous system's precise architecture.
Associated diseases and disorders	Disruptions in NeuN expression link closely to neurodegenerative diseases such as Parkinson's disease and Amyotrophic lateral sclerosis (ALS). Abnormal NeuN expression correlates with neuron loss and dysfunction in these conditions with connectivity to other affected proteins like alpha-synuclein in Parkinson's disease. In ALS abnormal NeuN-staining patterns indicate neuronal cell death serving as a potential marker for disease progression. Studying these connections improves our understanding of disease mechanisms and aids in the development of targeted therapies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

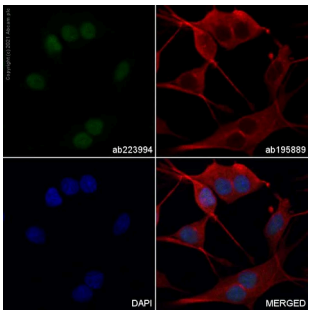
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

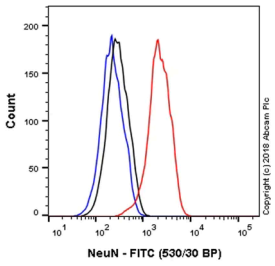
3 product images



Immunocytochemistry/ Immunofluorescence - FITC Anti-NeuN antibody [EPR12763] - Neuronal Marker (ab223994)

NeuN Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-NeuN antibody

ab223994 staining NeuN in B35 cells. The cells were fixed with 4% PFA (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab223994 at 1/100 dilution (shown in green) and ab195889, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 594), at 1/250 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue). Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

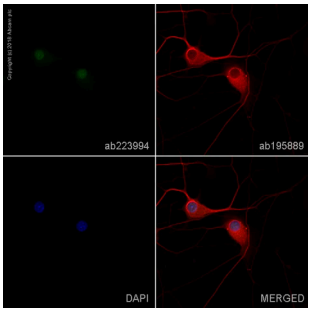


Flow Cytometry (Intracellular) - FITC Anti-NeuN antibody [EPR12763] - Neuronal Marker (ab223994)

NeuN Flow Cytometry (Intracellular) staining using rabbit Anti-NeuN antibody

Overlay histogram showing PC12 cells stained with ab223994 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS / 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (ab223994, 1/50 dilution) for 30 min at 22°C.
Isotype control antibody (black line) was Rabbit IgG (monoclonal) FITC (ab223339) used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5,000 events were collected using a 50 mW Blue laser (488nm) and 530/30 bandpass filter.



Immunocytochemistry/ Immunofluorescence - FITC Anti-NeuN antibody [EPR12763] - Neuronal Marker (ab223994)

NeuN Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-NeuN antibody

ab223994 staining NeuN in NGF-differentiated PC-12 cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab223994 at 1/100 dilution (shown in green) and Mouse monoclonal to alpha Tubulin (Alexa Fluor® 594) ab195889, at 1/250 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue).
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.