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Anti-NeuN RBFOX3 Rabbit Monoclonal Antibody

Catalog Number: M11954

Overview

Product Name	Anti-NeuN RBFOX3 Rabbit Monoclonal Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-NeuN RBFOX3 Rabbit Monoclonal Antibody catalog # M11954. Tested in WB, IHC, ICC/IF, IF applications. This antibody reacts with Human, Mouse, Rat.
Application	IF, IHC, ICC, WB
Clonality	Monoclonal AO-18
Formulation	Rabbit IgG in stabilizing components, phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	A6NFN3

Technical Details

Immunogen	A synthesized peptide derived from human NeuN
Isotype	Rabbit IgG
Form	Liquid
Concentration	0.5mg/ml
Purification	Affinity-chromatography
Suggested Dilutions	WB 1:500-2000 IHC 1:50-200 IF 1:50-200 ICC/IF 1:50-200

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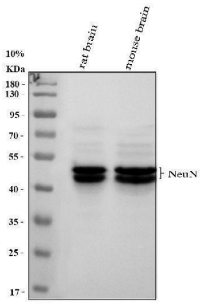
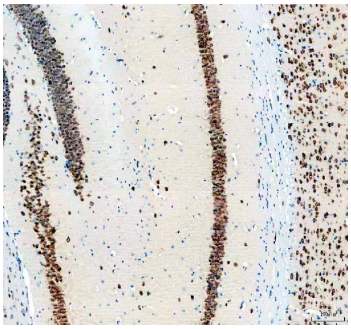
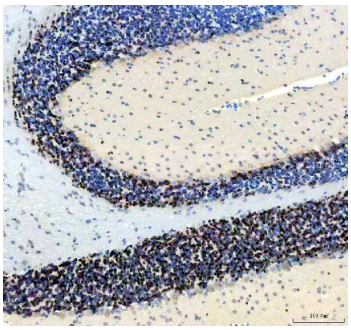
Anti-NeuN RBFOX3 Rabbit Monoclonal Antibody (M11954) Images



Western blot analysis of NeuN using anti-NeuN antibody (M11954). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: rat brain tissue lysates, Lane 2: mouse brain tissue lysates.After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-NeuN antigen affinity purified monoclonal antibody (M11954) at 1:1000 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for NeuN at approximately 46, 50 kDa. The expected band size for NeuN is at 34 kDa.



IHC analysis of NeuN using anti-NeuN antibody (M11954). NeuN was detected in a paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1:50 rabbit anti-NeuN Antibody (M11954) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of NeuN using anti-NeuN antibody (M11954). NeuN was detected in a paraffin-embedded section of mouse cerebellum tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1:50 rabbit anti-NeuN Antibody (M11954) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

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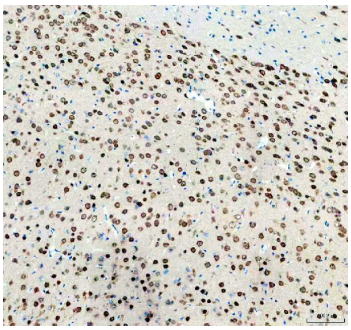
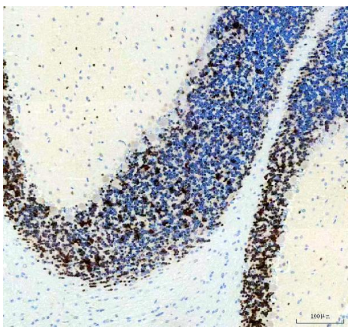


Antibody (M11954) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



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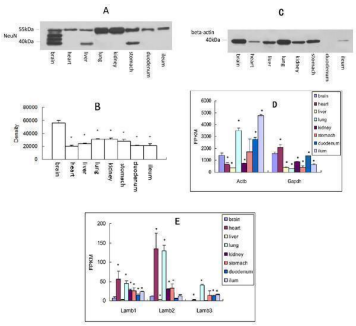
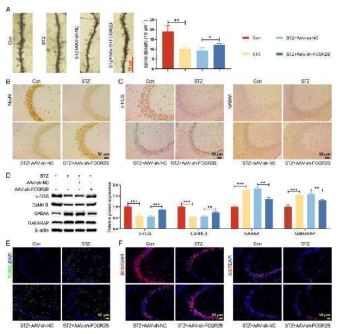


NeuN (Rbfox3) was expressed in different organs at protein level. (A) Western blot analysis; (B) semi-quantitative analysis of the results of Western blotting (Mean ± SD, n = 3); (C) beta -actin expressed in different organs at protein level, * P



Knockdown FCGR2B improved hippocampal neuronal excitability. A Representative images of Golgi staining of the hippocampal neuronal spines from the mice. B IHC assay was performed to examine the expression of NeuN in hippocampus of mice. C IHC assay was used to examine the expression of c-fos and GABAA in hippocampus of mice. D The expressions of c-fos, CaMKII, GABAA, and GABAARAP in hippocampus of mice were detected by Western blot. E TUNEL staining was conducted to assess cell apoptosis in hippocampus. F IF was used to detect BrdU and Ki67 positive cells in hippocampaltissue to analyzecell proliferation * P < 0.05, ** P < 0.01, *** P < 0.001 Full size imageIndex in PubMed under a CC BY license. PMID: 40537751

The hippocampal neuron in DM mice showed the morphological changes. A The work flow chart of how to construct a DM mouse model. B - C The levels of blood glucose and body weight of mice were assessed. D The level of insulin of mice was assessed. E - F Morris water maze test was evaluated the learning and memory ability of mice by

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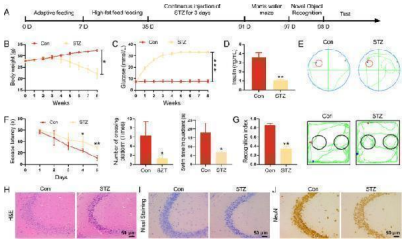
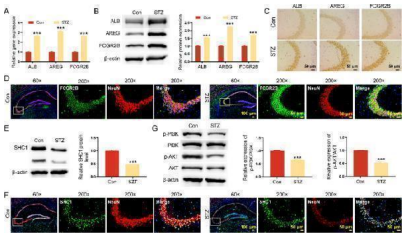
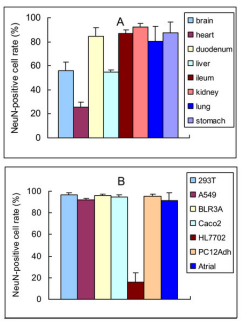


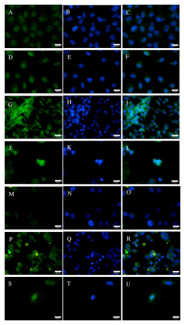
the escape latency time, number of crossing platform and swimming time in quadrant. G The recognition index among 4 groups in the novel object recognition test. H H&E staining evaluated the pathological changes of hippocampus. I Neuronal damage of the hippocampal region was assessed by Nissl staining. J IHC assay was used to examine the expression of NeuN in hippocampus of mice. * P < 0.05, ** P < 0.01, *** P < 0.001 Full size imageIndex in PubMed under a CC BY license. PMID: 40537751



FCGR2B were up-regulated in hippocampus of DM mice. A qRT-PCR was performed to detect the expression of ALB, AREG and FCGR2B mRNA expression in hippocampus of mice. B Western blot was conducted to detect the ALB, AREG and FCGR2B protein expression in hippocampus of mice. C IHC assay was employed to examine the ALB, AREG and FCGR2B protein expression in hippocampus of mice. D IF staining was utilized to detect the expression of FCGR2B and NeuN in hippocampus of mice. E Western blot was performed to detect the SHC1 protein expression in hippocampus of mice. F IF staining was performed to detect the expression of SHC1 and NeuN in hippocampus of mice. G Western blot was used to detect the p-PI3K and p-AKT protein expression in hippocampus of mice. *** P < 0.001 Full size imageIndex in PubMed under a CC BY license. PMID: 40537751



Quantitative analysis of NeuN-positive cells in rat organs and cultured cells (mean ± SD, n = 3). Photos can be seen in (rat organs) and (cultured cells). (A) NeuN-positive cell rate in rat organs; (B) NeuN-positive cell rate in cultured cells. Download full-size image DOI:Index in PubMed under a CC BY license. PMID: 31938576



Immunofluorescence (IF) analysis of different cell lines (bar = 20 μm). (A–C) 293T cell; (D–F) A549 cell; (G–I) BRL3A cell; (J–L) Caco2 cell; (M–O) HL7702 cell; (P–R) PC12Adh cell; (S–U) atrial muscle cell. Green fluorescence was stained to locate NeuN by FITC-linked secondary antibody, and blue fluorescence was stained to locate nucleus by Hoechst 33342. Download full-size image DOI:Index in PubMed under a CC BY license. PMID: 31938576

Double immunofluorescence (IF) analysis of rat heart (bar = 20 μm). (A–D) Cardiac muscle fibers in transection; (E–H) cardiac muscle fibers in longitudinal section. Red fluorescence was stained to locate Myl3 by Alexa Fluor ® 647-linked secondary antibody, green fluorescence was stained to locate NeuN by FITC-linked secondary antibody, and blue fluorescence was stained to locate nucleus by

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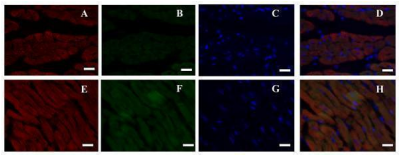
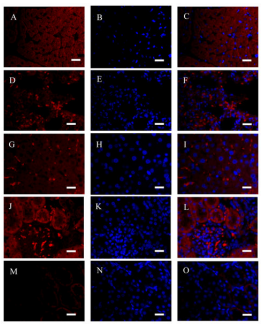
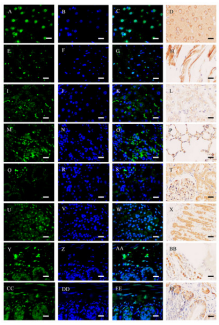


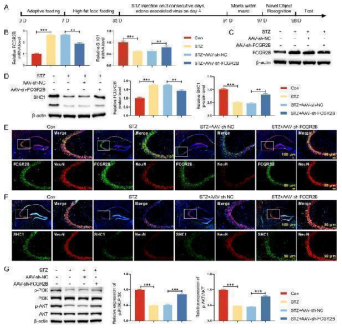
Hoechst 33342. Download full-size image DOI:Index in PubMed under a CC BY license. PMID: 31938576



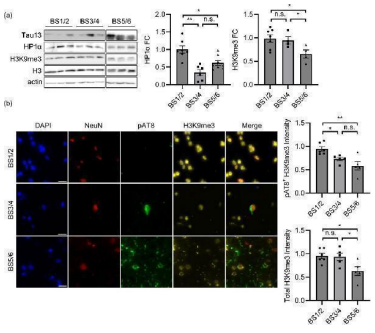
Immunofluorescence (IF) assays verified in four organs (bar = 20 μm). (A–C) Heart; (D–F) lung; (G–I) liver; (J–L) Kidney; (M–O) kidney (Negative control). Red fluorescence was stained to locate NeuN by another rabbit anti-NeuN monoclonal antibody (ab177487, Abcam), and blue fluorescence was stained to locate nucleus by Hoechst 33342. Negative control was only stained with Alexa Fluor ® 647-linked secondary antibody and Hoechst 33342. Download full-size image DOI:Index in PubMed under a CC BY license. PMID: 31938576



Immunofluorescence (IF) and immunohistochemistry (IHC) assays of different organs (bar = 20 μm). (A–D) Brain; (E–H) heart; (I–L), liver; (M–P) lung; (Q–T) kidney; (U–X) stomach; (Y–BB) duodenum; (CC–FF) ileum. As for IF, green fluorescence was stained to locate NeuN (BM4354, Boster) by FITC-linked secondary antibody, and blue fluorescence was stained to locate nucleus by Hoechst 33342. As for IHC, NeuN was stained in brown. Download full-size image DOI:Index in PubMed under a CC BY license. PMID: 31938576



Knockdown FCGR2B could promote the PI3K/AKT signaling pathway in vivo. A The work flow chart of how to construct a DM mouse model. B The mRNA levels of FCGR2B and SHC1 were assessed by qRT-PCR. C The protein levels of FCGR2B and SHC1 were evaluated by Western blot. D The protein level of SHC1 was determined by Western blot. E IF staining was used to detect the expression of FCGR2B and NeuN in hippocampus of mice. F IF staining was performed to detect the expression of SHC1 and NeuN in hippocampus of mice. G The expressions of p-PI3K and p-AKT in hippocampus of mice were evaluated by Western blot. ** P < 0.01, *** P < 0.001 Full size imageIndex in PubMed under a CC BY license. PMID: 40537751



Heterochromatin changes are associated with Tau pathology in AD temporal lobes at intermediate stages. (A) WB of heterochromatin markers HP1alpha and H3K9me3 in human brain samples at BS1/2 (N = 7), BS3/4 (N = 6) and BS5/6 (N = 8) and relative quantification. Histone H3 and Actin are the housekeeping genes. HP1alpha and H3K9me3 fold change is reported in the graphs. H3K9me3 has been normalized on total H3 histone. (B) Immunofluorescence and relative quantification of H3K9me3 in human brain samples at BS1/2 (N = 6), BS3/4 (N = 5) and BS5/6 (N = 5). Red: NeuN; yellow: H3K9me3; green: pAT8; blue: DAPI. Scale bar: 20 μm * p < 0.05; ** p < 0.01.Index in PubMed under a CC BY license. PMID: 39830212

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7 Publications Citing This Product

1. PubMed ID: -, Lanfen Chen,Wei Chen,Mengbei Zhang et al.Comparison of therapeutic effects of melatonin by two different routes in focal cerebral ischemic rats.Journal of Neurorestoratology 2019,07(01):47-53.

2. PubMed ID: 33692421, Manganas LN, Durá I, Osenberg S, Semerci F, Tosun M, Mishra R, Parkitny L, Encinas JM, Maletic-Savatic M. BASP1 labels neural stem cells in the neurogenic niches of mammalian brain. Sci Rep. 2021 Mar 10;11(1):5546. doi: 10.1038/s41598-021-85129-1. PMID: 33692421; PMCID: PMC7970918.

3. PubMed ID: 32593156, Li X,Shi MQ,Chen C,Du JR.Phthalide derivative CD21 ameliorates ischemic brain injury in a mouse model of global cerebral ischemia: involvement of inhibition of NLRP3.Int Immunopharmacol.2020 Sep;86:106714.doi: 10.1016/j.intimp.2020.106714.Epub 2020 Jun 24

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