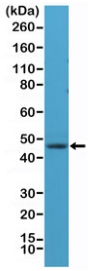
NeuN Antibody / RBFOX3 N-Terminal Epitope Antibody [clone RM312] (R20331)

Catalog No.	Formulation	Size
R20331-0.1ML	Antibody in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ul

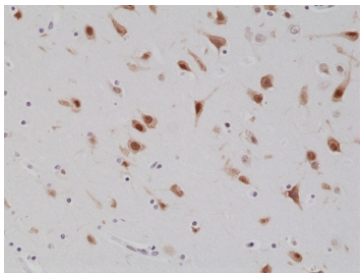
Recombinant RABBIT MONOCLONAL

Bulk quote request

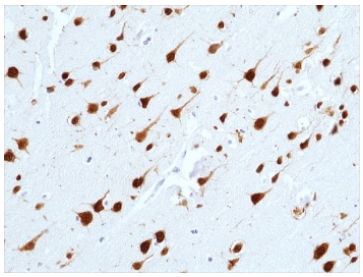
Availability	1-3 business days
Species Reactivity	Human, Mouse
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM312
Purity	Protein A purified from animal origin-free supernatant
UniProt	A6NFN3
Localization	Nuclear, cytoplasmic
Applications	Immunohistochemistry (FFPE): 1:500-1:1000 Western Blot: 1:1000-1:2000
Limitations	This NeuN Antibody / RBFOX3 N-Terminal Epitope Antibody is available for research use only.



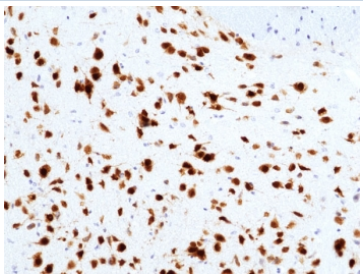
NeuN Antibody N-Terminal WB. Western blot analysis of RNA binding fox-1 homolog 3 / RBFOX3 (NeuN) in human brain lysate using recombinant rabbit monoclonal NeuN antibody, clone RM312, at 1:1000 dilution. A band is detected at approximately 46-48 kDa, consistent with the expected molecular weight of RBFOX3 isoforms, supporting detection of this neuronal nuclear protein with an N-terminal epitope-targeting antibody.



NeuN Antibody N-Terminal Brain IHC. Immunohistochemistry of RNA binding fox-1 homolog 3 / RBFOX3 (NeuN) in formalin-fixed, paraffin-embedded human brain tissue using recombinant rabbit monoclonal NeuN antibody, clone RM312, at 1:1000 dilution. HRP-DAB brown staining highlights nuclear labeling of neurons with scattered cytoplasmic signal, consistent with NeuN expression in mature neuronal populations, while surrounding non-neuronal cells show minimal staining and nuclei are counterstained blue. Heat induced epitope retrieval was performed by steaming sections in pH 6 citrate buffer for 20 min followed by cooling prior to staining.



NeuN Antibody N-Terminal Neuronal IHC. Immunohistochemistry of RNA binding fox-1 homolog 3 / RBFOX3 (NeuN) in formalin-fixed, paraffin-embedded human brain tissue using recombinant rabbit monoclonal NeuN antibody, clone RM312, at 1:1000 dilution. HRP-DAB brown staining highlights strong nuclear labeling of neurons with clear visualization of neuronal cell bodies and processes, consistent with NeuN expression in mature neuronal populations, while surrounding non-neuronal cells show minimal staining and nuclei are counterstained blue. Heat induced epitope retrieval was performed by steaming sections in pH 6 citrate buffer for 20 min followed by cooling prior to staining.



NeuN Antibody N-Terminal Mouse Brain IHC. Immunohistochemistry of RNA binding fox-1 homolog 3 / RBFOX3 (NeuN) in formalin-fixed, paraffin-embedded mouse brain tissue using recombinant rabbit monoclonal NeuN antibody, clone RM312, at 1:1000 dilution. HRP-DAB brown staining highlights widespread nuclear labeling of neurons throughout the brain parenchyma, consistent with NeuN expression in mature neuronal populations, while surrounding non-neuronal cells show minimal staining and nuclei are counterstained blue. Heat induced epitope retrieval was performed by steaming sections in pH 6 citrate buffer for 20 min followed by cooling prior to staining.

Description

RNA binding fox-1 homolog 3 (RBFOX3), commonly known as NeuN, is a neuron-specific nuclear protein widely used as a marker for mature neurons in the central and peripheral nervous systems. NeuN Antibody / RBFOX3 N-Terminal Epitope Antibody (clone RM312) is designed to recognize an N-terminal region of the RBFOX3 protein, providing an alternative detection profile compared to antibodies targeting other domains. NeuN antibody, also referred to as RBFOX3 antibody or neuronal nuclei marker antibody in the literature, is extensively used in studies of neurodevelopment, neuronal identity, and neuroanatomy.

RBFOX3 belongs to the FOX family of RNA-binding proteins that regulate alternative splicing of pre-mRNA transcripts. Through this function, NeuN contributes to neuron-specific gene expression programs and maintenance of neuronal phenotype. Its expression is largely restricted to post-mitotic neurons, making it a reliable marker for distinguishing neuronal populations from glial and other non-neuronal cell types.

The N-terminal region of RBFOX3 contains structural and regulatory elements that may influence protein stability, localization, or interactions with RNA and protein partners. Antibodies targeting this region can provide complementary detection compared to those recognizing central or C-terminal domains, which may be useful when evaluating protein conformation, isoform variation, or differential accessibility in fixed tissues and cell-based assays.

In immunohistochemistry, NeuN is typically observed as strong nuclear staining in neuronal cell bodies, with occasional cytoplasmic labeling depending on cell type and physiological context. This staining pattern enables clear visualization of neuronal architecture and is widely used for assessing neuronal density and tissue organization. Differences in staining intensity or distribution between antibodies may reflect epitope accessibility or fixation-dependent masking of specific regions of the protein.

Western blot analysis of RBFOX3 generally detects bands in the range of approximately 46-48 kDa, corresponding to known isoforms of the protein. Detection profiles may vary slightly depending on the epitope targeted and the conformational state of the protein in the sample.

The recombinant rabbit monoclonal clone RM312 antibody provides reliable detection of RBFOX3 with specificity for an N-terminal epitope. Its use offers an alternative and complementary approach to established NeuN antibodies, supporting robust evaluation of neuronal populations across multiple experimental conditions. This antibody is suitable for detecting RBFOX3 expression in research applications involving neuronal identification, neurodevelopmental studies, and analysis of neural tissue structure.

For a reference NeuN antibody supporting consistent detection of RBFOX3 in neuronal studies, see clone AO-18.

Application Notes

The stated application concentrations are suggested starting points. Titration of the NeuN Antibody / RBFOX3 N-Terminal Epitope Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A peptide corresponding to the N-terminus of human NeuN/RBFOX3 was used as the immunogen for the recombinant NeuN antibody.

Storage

Store the NeuN antibody at -20oC.

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