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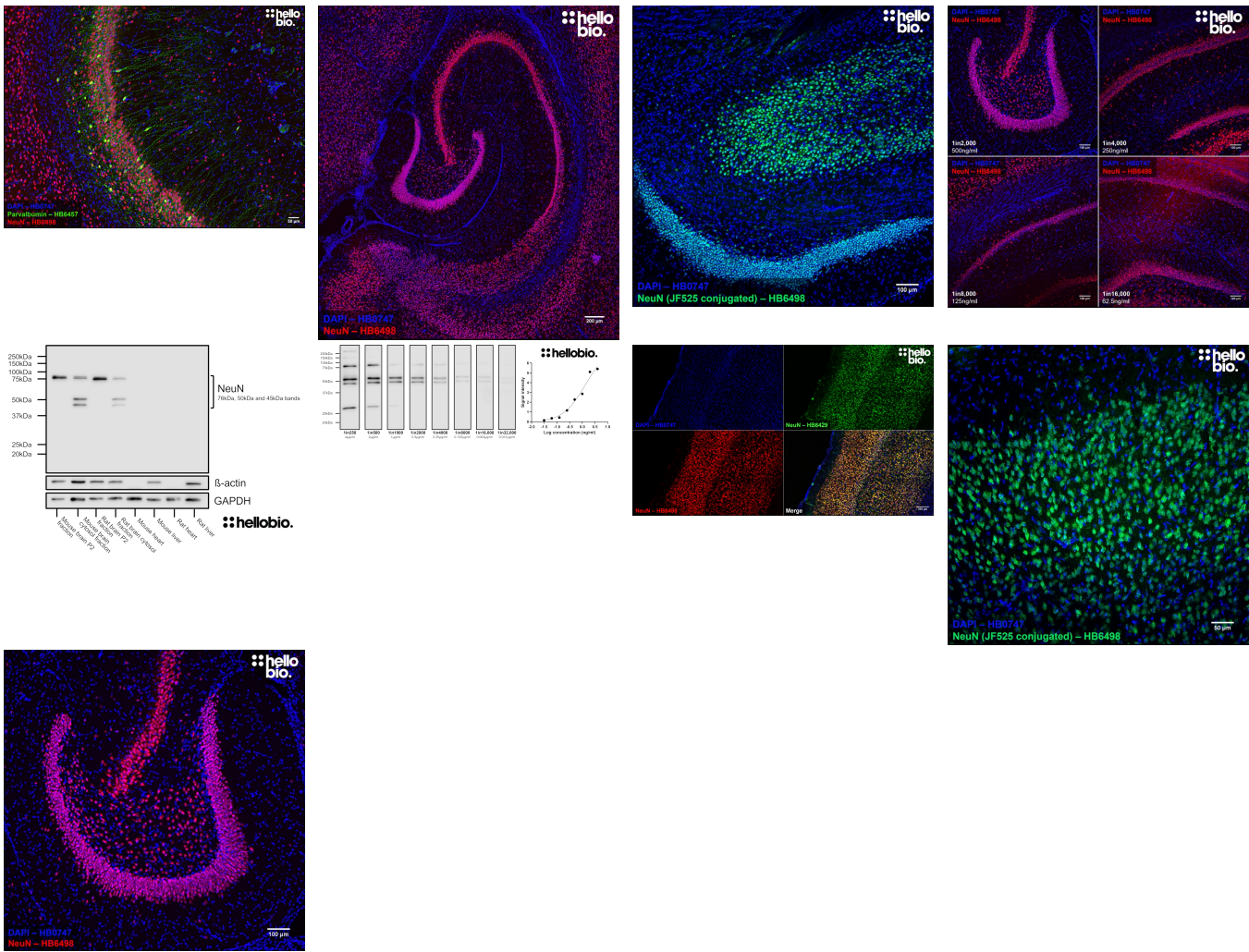
# DATASHEET

Anti-NeuN antibody ValidAb™

## Product overview

<b>Name</b>	Anti-NeuN antibody ValidAb™
<b>Cat No</b>	HB6498
<b>Alternative names</b>	Fox-3
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Target</b>	NeuN
<b>Description</b>	Antibody to NeuN - marker for mature neurones expressed in the nucleus. Part of the ValidAb™ range of highly validated, data-rich antibodies.

## Validation data



## Product information

**Immunogen** Amino acids 5 - 24 of human FOX3 expressed and purified from E. coli

<b>Epitope</b>	Amino acids 5-24 of human NeuN
<b>Isotype</b>	IgG
<b>Purification</b>	Immunogen affinity purification
<b>Concentration</b>	1mg/ml
<b>Formulation</b>	50% PBS, 50% glycerol + 5mM sodium azide
<b>Predicted species reactivity</b>	Mouse, Rat, Human
<b>Tested species reactivity</b>	Mouse, Rat

## Tested applications

<b>Applications</b>	WB, IHC(IF)
<b>Western blot optimal concentration</b>	0.5µg/ml (1:2000 dilution) as tested in a rat brain cytosol preparation
<b>IHC(IF) optimal concentration</b>	0.5µg/ml (1:2000 dilution) as tested in rat brain sections
<b>Positive control</b>	NeuN is highly expressed in the neurons of the CNS and PNS. It is also expressed in SH-SY5Y cells.
<b>Negative control</b>	Any tissue not of neural origin. Most cell lines are NeuN negative.
<b>Open data link</b>	Please follow this <a href="#">link to OSF</a>

## Target information

<b>Other names</b>	FOX3, RNA binding protein fox-1 homolog 3, Fox-1 homolog C, RBFOX3, RFOX3
<b>UniProt ID</b>	A6NFN3
<b>Gene name</b>	RBFOX3
<b>NCBI full gene name</b>	RNA binding fox-1 homolog 3
<b>Entrez gene ID</b>	146713
<b>Amino acids</b>	Dependent on isoform
<b>Isoforms</b>	NeuN binds primarily to FOX3 which has two isoforms. Isoform 1 is described as the canonical sequence with 312 amino acids (33.8kDa) while isoform 2 has a 13 residue insert at position 312 leading to a total length of 325 amino acids (35.1kDa). NeuN antibodies also bind to synapsin-1 in western blot experiments (but not in IHC or ICC) which has two isoforms. Isoform 1 is 705aa long (74.1kDa) while isoform 2 is shorter at 669aa (70.0kDa).
<b>Expression</b>	NeuN is expressed only within neurones. While the vast majority of neurones express NeuN some cell types such as Purkinje cells, stellate and golgi cells do not show immunoreactivity.
<b>Subcellular expression</b>	Expression is primarily localised to the nucleus however some FOX3 isoforms can localise to the cytosol.
<b>Target function</b>	FOX3 is a splicing regulator of pre-mRNA responsible for neuronal specific alternative splicing of neuronal proteins.
<b>Processing</b>	None
<b>Post translational modifications</b>	Phosphorylation has been reported (see Lind et al., 2004. J Neurosci Res. 79: 295-302) which is directly related to immunoreactivity whereby dephosphorylation abolished staining.
<b>Homology (compared to human)</b>	Mouse FOX3 shows 95.02% identity to human FOX3 whereas rat FOX3 shows no similarity due to a large 47 residue insertion at amino acid 252 in rats.
<b>Similar proteins</b>	RNA-binding protein fox-1 homolog 1 (40-44kDa) shows 67.3% identity while RNA-binding protein fox-1 homolog 2 (37-47kDa) shows 56.5% identity

## Storage & Handling

<b>Storage instructions</b>	-20 °C
<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

## References

### NeuN: a useful neuronal marker for diagnostic histopathology.

Wolf HK et al (1996) The journal of histochemistry and cytochemistry : official journal of the Histochemistry Society 44  
**PubMedID** [8813082](#)

### NeuN As a Neuronal Nuclear Antigen and Neuron Differentiation Marker.

Gusel'nikova VV et al (2015) Acta naturae 7  
**PubMedID** [26085943](#)

### Identification of neuronal nuclei (NeuN) as Fox-3, a new member of the Fox-1 gene family of splicing factors.

Kim KK et al (2009) The Journal of biological chemistry 284

**PubMedID** [19713214](#)

**Characterization of the neuronal marker NeuN as a multiply phosphorylated antigen with discrete subcellular localization.**

Lind D et al (2005) Journal of neuroscience research 79

**PubMedID** [15605376](#)

**Novel Insights into NeuN: from Neuronal Marker to Splicing Regulator.**

Duan W et al (2016) Molecular neurobiology 53

**PubMedID** [25680637](#)

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