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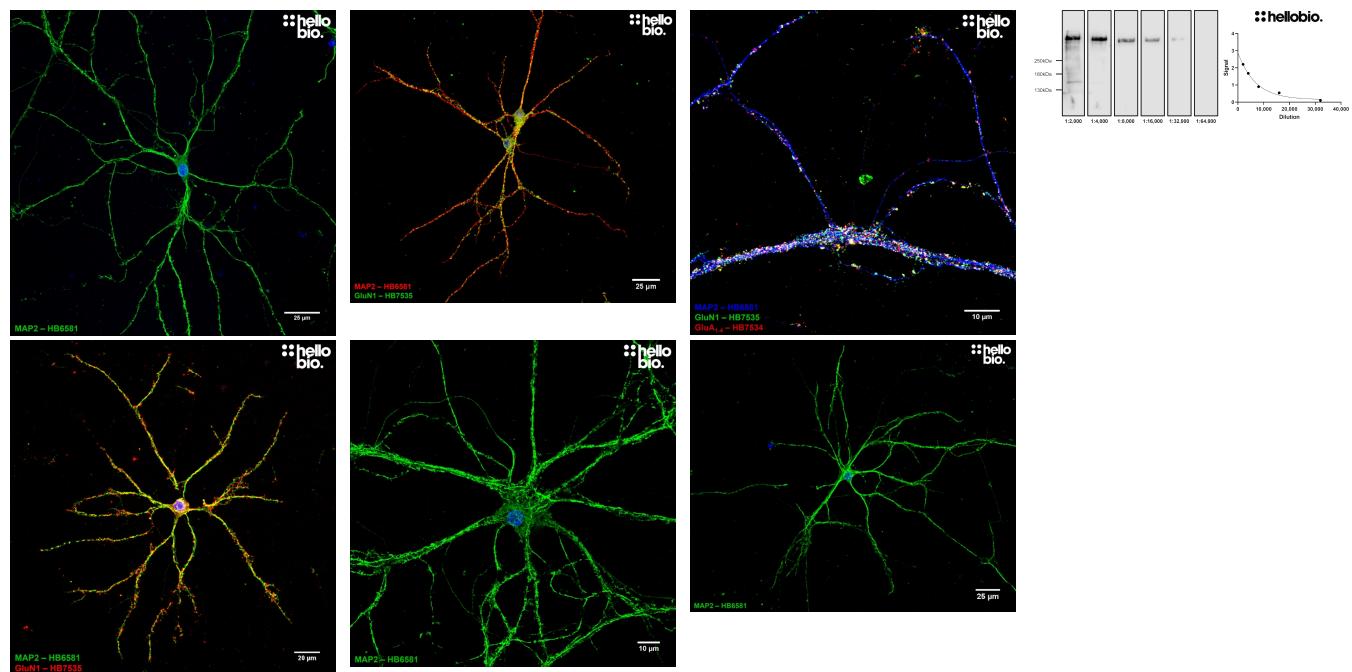
## DATASHEET

Anti-MAP2 antibody ValidAb™

### Product overview

Name	Anti-MAP2 antibody ValidAb™
Cat No	HB6581
Host	Chicken
Clonality	Polyclonal
Target	MAP2
Description	Antibody to MAP2 - cytoskeletal protein used as a neuronal marker. Part of the ValidAb™ range of highly validated, data-rich antibodies.

### Validation data



### Product information

Immunogen	Combination of three recombinant proteins derived from human MAP2 (aa233-684, aa712-1136 and aa1137 - 1588)
Isotype	IgY
Purification	Affinity chromatography
Formulation	Lyophilised. When reconstituted contains IgY preparation with 5mM sodium azide and 1% recombinant BSA.
Predicted species reactivity	Mouse, Rat, Human
Tested species reactivity	Mouse, Rat

## Tested applications

<b>Applications</b>	ICC
<b>ICC optimal concentration</b>	1:2,000 as tested in cultured rat neurons
<b>Positive control</b>	MAP2 should be found in any neural tissue sample but is not widely expressed in cell lines.
<b>Negative control</b>	Non-neural tissues such as liver or muscle. Most common non-neural derived cell lines, such as HeLa and HEK293 are also MAP2 negative.
<b>Open data link</b>	Please follow this <a href="#">link to OSF</a>

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## Target information

<b>Other names</b>	MAP-2, Microtubule-associated protein 2
<b>UniProt ID</b>	P11137
<b>Gene name</b>	MAP2
<b>NCBI full gene name</b>	microtubule associated protein 2
<b>Entrez gene ID</b>	<a href="#">4133</a>
<b>Amino acids</b>	1827 (199.5kDa)
<b>Isoforms</b>	MAP2 has 4 key isoforms: Isoform 1 (MAP2b), 1827aa, 199.5kDa; Isoform 2 (MAP2c), 471aa, 49.6kDa, missing aa152-1507 - juvenile isoform not expressed in adulthood; Isoform 3, 1823aa, 199.0kDa, missing aa152-155; Isoform 4, 559aa, 59.0kDa, multiple substitutions and missing aa230-1528.
<b>Expression</b>	Expressed highly within the brain (neuron specific) and to a lesser degree in the testes
<b>Subcellular expression</b>	Expressed as part of the cytoskeleton
<b>Target function</b>	MAP2 interacts with both microtubules and F-actin to stabilise microtubules within neurones. Expression is enriched in dendrites with knockout reducing dendritic microtubule density and dendrite length.
<b>Processing</b>	None
<b>Post translational modifications</b>	MAP2 contains numerous phosphorylation sites which overlap with the immunogen sequence.
<b>Homology (compared to human)</b>	Mouse and rat show 79.8% and 77.7% identity to human MAP2 respectively in a BLAST search.
<b>Similar proteins</b>	None

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## Storage & Handling

<b>Storage instructions</b>	-20°C then use reconstitution advice
<b>Reconstitution advice</b>	Upon receipt store at either -20°C or -80°C.

**Storage instructions**

-20°C then use reconstitution advice

For 100µg packs either:

- Reconstitute with 100µl dH<sub>2</sub>O and store at 4°C
- Reconstitute with 50µl dH<sub>2</sub>O and 50µl glycerol then store at -20°C
- Reconstitute with 100µl dH<sub>2</sub>O, aliquot then snap freeze and store at -80°C

For 25µg packs either:

- Reconstitute with 25µl dH<sub>2</sub>O and store at 4°C
- Reconstitute with 12.5µl dH<sub>2</sub>O and 12.5µl glycerol then store at -20°C
- Reconstitute with 25µl dH<sub>2</sub>O, aliquot then snap freeze and store at -80°C

For more information [read our guide](#) on the best care for your product. Take care when opening as the precipitate is extremely light and can easily be lost if disturbed. When reconstituting make sure that the antibody is thoroughly dissolved by pipetting up and down before giving the antibody a brief spin at 10,000g to make sure that all material is recovered and at the bottom of the tube.

**Important**

This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

## References

**Differences in the cellular distributions of two microtubule-associated proteins, MAP1 and MAP2, in rat brain.**

Huber G et al (1984) The Journal of neuroscience : the official journal of the Society for Neuroscience 4

PubMedID [6198491](#)

**Microtubule-associated protein MAP2 shares a microtubule binding motif with tau protein.**

Lewis SA et al (1988) Science (New York, N.Y.) 242

PubMedID [3142041](#)

**Projection domains of MAP2 and tau determine spacings between microtubules in dendrites and axons.**

Chen J et al (1992) Nature 360

PubMedID [1465130](#)

**The MAP2/Tau family of microtubule-associated proteins.**

Dehmelt L et al (2005) Genome biology 6

PubMedID [15642108](#)