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DATASHEET

Anti-MAP2 antibody ValidAbTM

Product overview

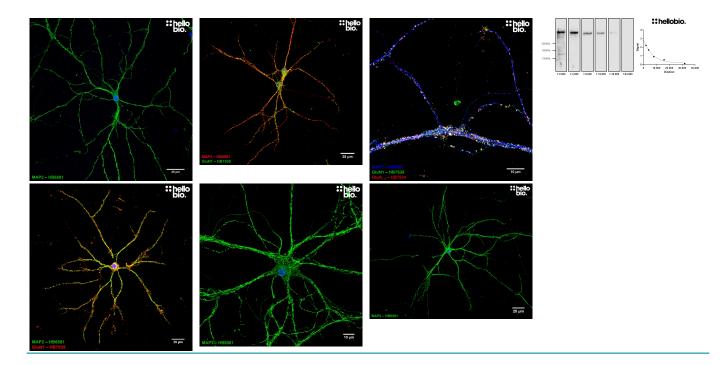
Name Anti-MAP2 antibody ValidAbTM

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

Applications

ICC optimal concentration

Positive control Negative control 1:2,000 as tested in cultured rat neurons

MAP2 should be found in any neural tissue sample but is not widely expressed in cell lines.

Non-neural tissues such as liver or muscle. Most common non-neural derived cell lines, such as HeLa

and HEK293 are also MAP2 negative.

Open data link Please follow this link to OSF

Target information

Other names MAP-2, Microtubule-associated protein 2

UniProt ID P11137 Gene name MAP2

NCBI full gene name microtubule associated protein 2

Entrez gene ID 4133

Amino acids 1827 (199.5kDa)

Isoforms 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.

Expression Expressed highly within the brain (neuron specific) and to a lesser degree in the testes

Subcellular expression Expressed as part of the cytoskeleton

Target function MAP2 interacts with both microtubules and F-actin to stabilise microtubules within neurones.

Expression is enriched in dendrites with knockout reducing dendritic microtubule densitiy and dendrite

length. None

Processing

Post translational modifications

Homology (compared to

human)

Similar proteins

MAP2 contains numerous phosphorylation sites which overlap with the immunogen sequence.

Mouse and rat show 79.8% and 77.7% identity to human MAP2 respectively in a BLAST search.

None

Storage & Handling

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

For 100µg packs either:

- Reconstitute with 100µl dH₂O and store at 4°C
- \bullet Reconstitute with 50µl dH $_2$ O and 50µl glycerol then store at -20 $^{\circ}$ C
- Reconstitute with 100 μ l dH₂O, aliquot then snap freeze and store at -80°C

For 25µg packs either:

- Reconstitute with 25µl dH₂O and store at 4°C
- Reconstitute with 12.5 μ l dH $_2$ O and 12.5 μ l glycerol then store at -20 $^{\circ}$ C
- Reconstitute with 25µl dH₂O, 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.

10,000g to make sure that all material is recovered and at the bottom of

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

for human or veterinary use

References

Important

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