

Product datasheet

Anti-Myelin Basic Protein antibody ab123499

[1 References](#) [2 Images](#)

Overview

Product name	Anti-Myelin Basic Protein antibody
Description	Chicken polyclonal to Myelin Basic Protein
Host species	Chicken
Tested applications	Suitable for: WB, ICC/IF
Species reactivity	Reacts with: Mouse, Rat, Cow, Human
Immunogen	Mixture of 3 Human Myelin Basic Protein synthetic peptides, representing the different forms of the protein (alternate transcription from a single gene).
Positive control	ICC/IF: Rat mixed neuron/glia cultures WB: Rat spinal cord whole tissue homogenate, or peripheral nerve homogenate
General notes	<p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.</p> <p>In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.</p> <p>We are also updating the applications & species that this product has been "predicted to work with," however this information is not covered by our Abpromise guarantee.</p> <p>Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.</p> <p>Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&As.</p>

Properties

Form	Liquid
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Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.066% Sodium azide Constituent: 99% PBS
Purity	Protein L purified
Clonality	Polyclonal
Isotype	IgY

Applications

Our [Abpromise guarantee](#) covers the use of **ab123499** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/10000. Predicted molecular weight: 33 kDa. A prominent band is often shown at about 20 kDa. This is a convergence of 3 different forms of the protein made by alternate transcription from a single gene, which have molecular weights of 21.5, 18.5, and 17.2 kDa.
ICC/IF		1/1000.

Target

Function	The classic group of MBP isoforms (isoform 4-isoform 14) are with PLP the most abundant protein components of the myelin membrane in the CNS. They have a role in both its formation and stabilization. The smaller isoforms might have an important role in remyelination of denuded axons in multiple sclerosis. The non-classic group of MBP isoforms (isoform 1-isoform 3/Golli-MBPs) may preferentially have a role in the early developing brain long before myelination, maybe as components of transcriptional complexes, and may also be involved in signaling pathways in T-cells and neural cells. Differential splicing events combined with optional post-translational modifications give a wide spectrum of isomers, with each of them potentially having a specialized function. Induces T-cell proliferation.
Tissue specificity	MBP isoforms are found in both the central and the peripheral nervous system, whereas Golli-MBP isoforms are expressed in fetal thymus, spleen and spinal cord, as well as in cell lines derived from the immune system.
Involvement in disease	Note=The reduction in the surface charge of citrullinated and/or methylated MBP could result in a weakened attachment to the myelin membrane. This mechanism could be operative in demyelinating diseases such as chronic multiple sclerosis (MS), and fulminating MS (Marburg disease).
Sequence similarities	Belongs to the myelin basic protein family.
Developmental stage	Expression begins abruptly in 14-16 week old fetuses. Even smaller isoforms seem to be produced during embryogenesis; some of these persisting in the adult. Isoform 4 expression is more evident at 16 weeks and its relative proportion declines thereafter.
Post-translational modifications	Several charge isomers of MBP; C1 (the most cationic, least modified, and most abundant form), C2, C3, C4, C5, C6, C7, C8-A and C8-B (the least cationic form); are produced as a result of optional PTM, such as phosphorylation, deamidation of glutamine or asparagine, arginine

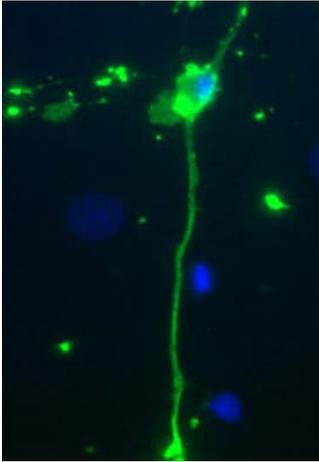
citrullination and methylation. C8-A and C8-B contain each two mass isoforms termed C8-A(H), C8-A(L), C8-B(H) and C8-B(L), (H) standing for higher and (L) for lower molecular weight. C3, C4 and C5 are phosphorylated. The ratio of methylated arginine residues decreases during aging, making the protein more cationic.

The N-terminal alanine is acetylated (isoform 3, isoform 4, isoform 5 and isoform 6). Arg-241 was found to be 6% monomethylated and 60% symmetrically dimethylated.

Cellular localization

Myelin membrane. Cytoplasmic side of myelin.

Images



ab123499, at a 1/1000 dilution, staining Myelin Basic Protein in an oligodendrocyte from Rat mixed neuron/glia culture by Immunofluorescence.

Immunocytochemistry/ Immunofluorescence - Anti-Myelin Basic Protein antibody (ab123499)



Anti-Myelin Basic Protein antibody (ab123499) at 1/10000 dilution + whole tissue homogenate of Rat spinal cord

Predicted band size: 33 kDa

Acrylamide gel concentration: 12%

20 kDa →

Western blot - Anti-Myelin Basic Protein antibody (ab123499)

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