

### Anti-Myelin Basic Protein antibody [12] ab7349

重组

★★★★★ **21 Abreviews** **264 References** **5 图像**

#### 概述

产品名称	Anti-Myelin Basic蛋白抗体[12]
描述	大鼠单克隆抗体[12] to Myelin Basic蛋白
宿主	Rat
经测试应用	适用于: ICC/IF, WB, IHC-P
种属反应性	与反应: Mouse, Rat, Human
免疫原	Full length protein corresponding to Cow Myelin Basic Protein.
表位	Amino acids 82-87 (DENPVV).
阳性对照	WB: Human cerebellum, Mouse brain tissue and Rat brain tissue. IHC-P: Human cerebellum tissue. ICC/IF: Mouse primary oligodendroglia cells.
常规说明	<p>This product has switched from a hybridoma to recombinant production method on 08th November 2021.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p>

#### 性能

形式	Liquid
存放说明	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
存储溶液	Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
纯度	Ion Exchange Chromatography
克隆	单克隆
克隆编号	12
同种型	IgG2a

## 应用

### The Abpromise guarantee

**Abpromise™**承诺保证使用ab7349于以下的经测试应用

“应用说明”部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
ICC/IF		1/200.
WB	★★★★★ (2)	1/1000.
IHC-P	★★★★★ (6)	1/4000. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

## 靶标

### 功能

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.

### 组织特异性

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.

### 疾病相关

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).

### 序列相似性

Belongs to the myelin basic protein family.

### 发展阶段

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.

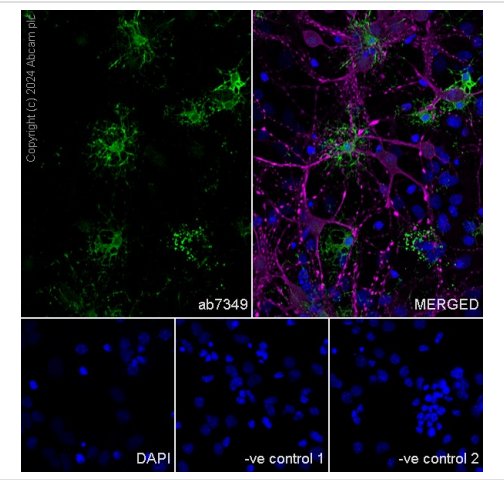
### 翻译后修饰

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.

### 细胞定位

Myelin membrane. Cytoplasmic side of myelin.



Immunocytochemistry/ Immunofluorescence - Anti-Myelin Basic Protein antibody [12] (ab7349)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized mouse primary neural/glia cells labelling Myelin Basic Protein with ab7349 at a 1/200 dilution, followed by Goat anti-Rat secondary (Alexa Fluor® 488) ([ab150157](#)) secondary antibody at a 1/1000 dilution. Confocal image showing positive staining in mouse primary oligodendroglia cells (shown in green). Nuclear DNA was labeled with DAPI (shown in blue).

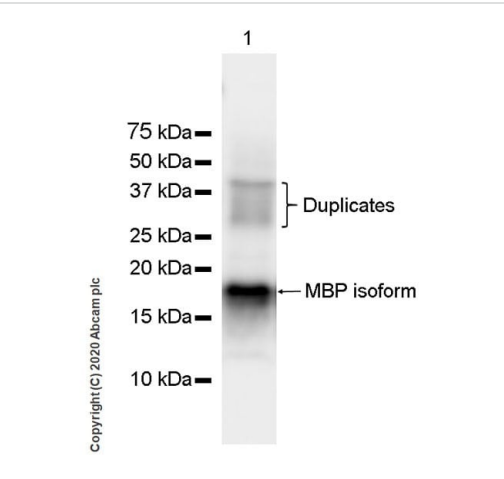
Counterstained with Anti-MAP2 antibody ([ab183830](#)) at a 1/1000 dilution, followed by Goat Anti-Rabbit secondary (Alexa Fluor® 594) ([ab150080](#)) at a 1/1000 dilution (shown in magenta).

Confocal scanning Z step was set as 0.3 µm followed by image processing with maximum Z projection. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

The negative controls are as follows:

-ve control 1: Myelin Basic Protein (ab7349) at a 1/200 dilution, followed by Goat anti-Rabbit secondary (Alexa Fluor® 594) ([ab150080](#)) at a 1/1000 dilution.

-ve control 2: Anti-MAP2 ([ab183830](#)) at a 1/1000 dilution, followed by Goat anti-Rat secondary (Alexa Fluor® 488) ([ab150157](#)) at a 1/1000 dilution.



Western blot - Anti-Myelin Basic Protein antibody [12] (ab7349)

Anti-Myelin Basic Protein antibody [12] (ab7349) at 1/5000 dilution + Human cerebellum tissue lysate at 10 µg

### Secondary

Goat Anti-Rat IgG H&L (HRP) ([ab205720](#)) at 1/10000 dilution

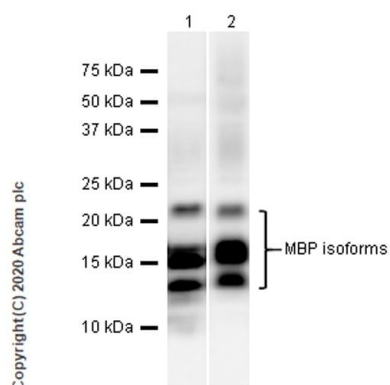
Developed using the ECL technique.

**Observed band size:** 18.5 kDa

**Exposure time:** 1 second

The molecular weight observed was in consistency with the literature (PMID: 9299539).

Blocking buffer: 5% NFDM/TBST.



Western blot - Anti-Myelin Basic Protein antibody  
[12] (ab7349)

**All lanes** : Anti-Myelin Basic Protein antibody [12] (ab7349) at  
1/5000 dilution

**Lane 1** : Mouse brain tissue lysate

**Lane 2** : Rat brain tissue lysate

Lysates/proteins at 10 µg per lane.

### Secondary

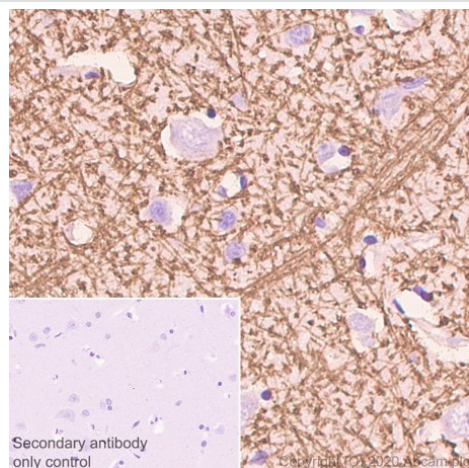
**All lanes** : Goat Anti-Rat IgG H&L (HRP) (**ab205720**) at 1/10000  
dilution

**Observed band size:** 14-21.5 kDa

The molecular weight observed was in consistency with the  
literature (PMID: 9299539).

Blocking buffer: 5% NFDM/TBST.

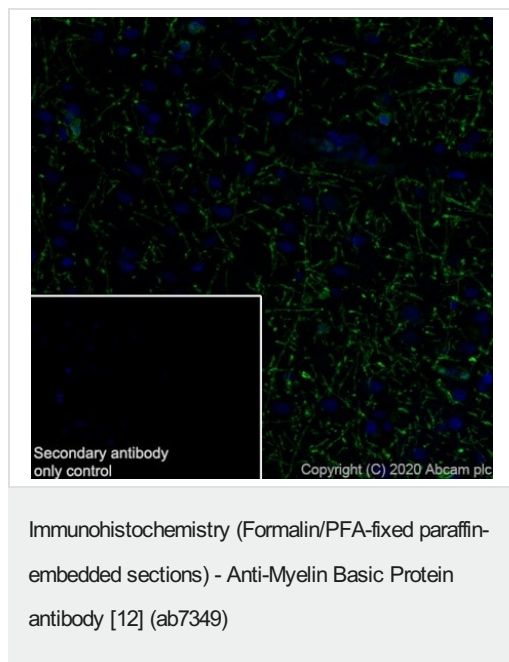
Exposure time: Lane 1: 3 seconds; Lane 2: 1 second.



Immunohistochemistry (Formalin/PFA-fixed paraffin-  
embedded sections) - Anti-Myelin Basic Protein  
antibody [12] (ab7349)

Immunohistochemical analysis of paraffin-embedded Human  
cerebrum labeling Myelin Basic Protein with ab7349 at 1/4000  
dilution (0.259 µg/ml) followed by a ready to use Goat Anti-Rat IgG  
H&L (HRP polymer; **ab214882**). The section was incubated with  
ab7349 for 30 mins at room temperature. The immunostaining was  
performed on a Leica Biosystems BOND® RX instrument.  
Counterstained with Hematoxylin.

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope  
retrieval solution 1) for 20 mins.



Immunohistochemical analysis of paraffin-embedded Human cerebrum labeling Myelin Basic Protein with ab7349 at 1/4000 dilution (0.259 µg/ml) followed by a ready to use Goat Anti-Rat IgG H&L (HRP polymer; **ab214882**). The section was incubated with ab7349 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with DAPI.

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins.

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