

Anti-Myelin Basic Protein antibody [12] ab7349

リコンビナント

★★★★★ **21 Abreviews** **264 References** 画像数 5

製品の概要

製品名	Anti-Myelin Basic Protein antibody [12]
製品の詳細	Rat monoclonal [12] to Myelin Basic Protein
由来種	Rat
アプリケーション	適用あり: ICC/IF, WB, IHC-P
種交差性	交差種: Mouse, Rat, Human
免疫原	Full length protein corresponding to Cow Myelin Basic Protein.
エピトープ	Amino acids 82-87 (DENPVV).
ポジティブ・コントロール	WB: Human cerebellum, Mouse brain tissue and Rat brain tissue. IHC-P: Human cerebellum tissue. ICC/IF: Mouse primary oligodendroglia cells.
特記事項	<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"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p>

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
バッファー	Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
精製度	Ion Exchange Chromatography
ポリ/モノ	モノクローナル
クローン名	12
アイソタイプ	IgG2a

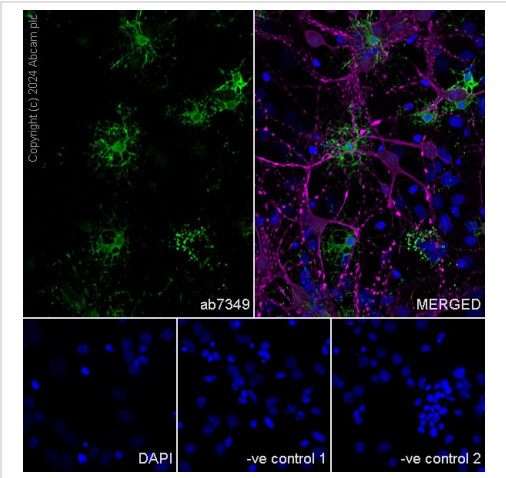
アプリケーション

The Abpromise guarantee Abpromise保証は、次のテスト済みアプリケーションにおけるab7349の使用に適用されます
アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
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.

ターゲット情報

機能	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.
組織特異性	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.
関連疾患	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).
配列類似性	Belongs to the myelin basic protein family.
発生段階	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.
翻訳後修飾	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.
細胞内局在	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).

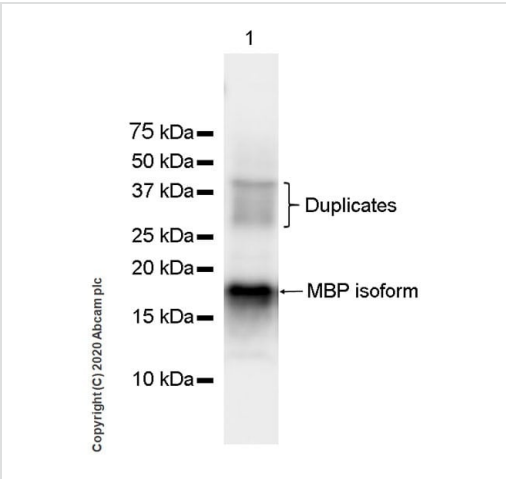
Counterstained with Anti-MAP2 antibody ([ab183830](#)) at a 1/1000 dilution, followed by Goat Anti-Rabbit secondary (Alexa Fluor® 594) ([ab150080](#)) at a 1/1000 dilution (shown in magenta).

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

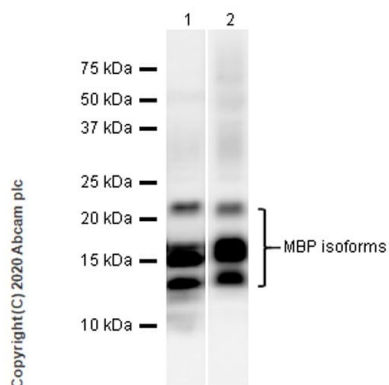
Developed using the ECL technique.

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

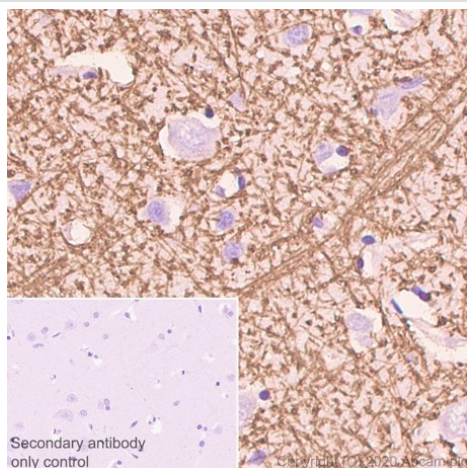
All lanes : Goat Anti-Rat IgG H&L (HRP) ([ab205720](#)) at 1/10000
dilution

Observed band size: 14-21.5 kDa

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

Blocking buffer: 5% NFDm/TBST.

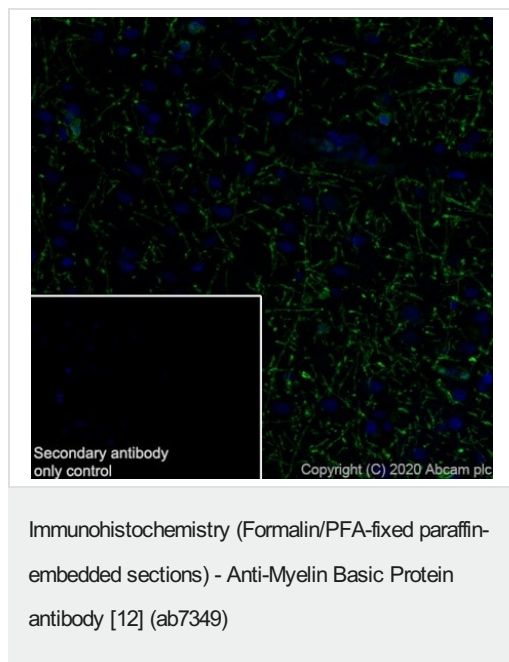
Exposure time: Lane 1: 3 seconds; Lane 2: 1 second.



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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