abcam

ab62631

Anti-Myelin Basic Protein antibody [MBP101] - BSA and Azide free

Anti-Myelin Basic Protein antibody [MBP101] - BSA and Azide free (ab62631) is a mouse monoclonal antibody provided in a PBS only buffer for easy conjugation detecting Myelin Basic Protein in **Flow Cytometry**. Suitable for **Human, Rat**.

- BSA, sodium azide, and glycerol-free for easy conjugation
- Over 100 publications
- Trusted since 2008

Key facts

Isotype	IgG2b
Host species	Mouse
Storage buffer	pH: 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Native Full Length Protein corresponding to Human MBP. Database link P02686
Carrier free	Yes
Clone number	MBP101
Purification technique	Affinity purification Protein G
Concentration	1.8 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified antibody

Reactivity data

ICC

Tested

Species	Rat
Dilution info	1 µg/mL
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Primates
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1 µg for 10^6 Cells
Notes	ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Primates
Dilution info	-
Notes	-

Target data

See full target information MBP

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.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-Myelin Basic Protein antibody [MBP101] - BSA and Azide free (ab62631) is a mouse monoclonal antibody and is validated for use in Flow Cytometry (Flow Cyt) in Human, Rat samples.

Trusted by the scientific community
Anti-Myelin Basic Protein [MBP101] - BSA and Azide free (ab62631) was first used in a scientific publication in 2008 and has been cited over 100 times in peer-reviewed journals.

Reviewed by scientists

Anti-Myelin Basic Protein [MBP101] - BSA and Azide free (ab62631) has over 10 independent reviews from customers.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The myelin basic protein also referred to as MBP or MBP protein plays an important mechanical role in the central nervous system. It is a major component in the formation and stability of the myelin sheath which wraps around nerve fibers to ensure efficient neural signaling. The molecular weight of MBP can vary due to alternative splicing; one common form has a mass of about 18.5 kDa. MBP is expressed predominantly in oligodendrocytes within the brain and spinal cord where it helps form the myelin sheath. MBP2 is another variant that may be mentioned in some contexts.
Biological function summary	MBP is not just a passive structural element; it binds and interacts with lipids and other proteins to maintain the compact structure of the myelin sheath. MBP forms part of a complex that includes various other proteins and lipids ensuring the stability and function of myelin. Misfolding or altered expression of MBP can compromise myelin integrity affecting the insulation of neural pathways and signal transmission.
Pathways	MBP is an essential component in the pathways of myelination and neural plasticity. It plays a role in the signaling pathways that stimulate the development and maintenance of the myelin sheath. The protein interacts with other elements of the myelin sheath such as proteolipid protein (PLP) and myelin-associated glycoprotein (MAG) to coordinate its formation and repair processes.
Associated diseases and disorders	MBP is linked closely to multiple sclerosis (MS) and other demyelinating conditions. Damage to or autoimmunity against MBP leads to the degradation of the myelin sheath contributing to the neurological symptoms in MS. The protein interacts with elements of the immune system with autoantibodies targeting MBP often found in MS patients. Another disorder associated with MBP dysfunction is Charcot-Marie-Tooth disease where abnormal MBP expression and structure can impact nerve function.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

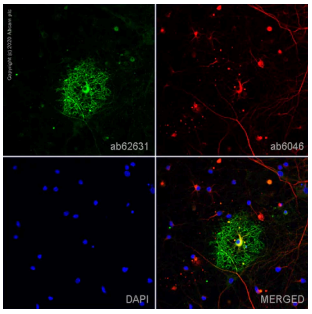
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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2 product images

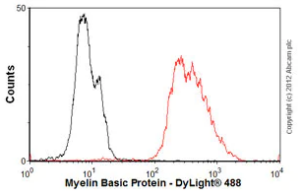


Immunocytochemistry - Anti-Myelin Basic Protein antibody [MBP101] - BSA and Azide free (ab62631)

Myelin Basic Protein Immunocytochemistry staining using mouse Anti-Myelin Basic Protein antibody

ab62631 staining Myelin Basic Protein in primary hippocampal rat neurons/glia, (obtained from Neuromics, cat. no. PC35101), DIV14. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% PBS-Tween for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab62631 at 1µg/ml and ab6046, Rabbit polyclonal to beta Tubulin - Loading Control. Cells were then incubated with ab150117, Goat polyclonal Secondary Antibody to Mouse IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution (shown in green) and ab150080, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 594) at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).
Also suitable in cells fixed with 4% paraformaldehyde (10 min).

Image was acquired with a confocal microscope (Leica-Microsystems TCS SP8) and a single confocal section is shown.



Flow Cytometry - Anti-Myelin Basic Protein antibody [MBP101] - BSA and Azide free (ab62631)

Myelin Basic Protein Flow Cytometry staining using mouse Anti-Myelin Basic Protein antibody

Overlay histogram showing SH-SY5Y cells stained with ab62631 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab62631, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG2b [PLPV219] (ab91366, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in SH-SY5Y cells fixed with 4% paraformaldehyde (10 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.