

MBP Rabbit pAb
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Catalog # AP94708**Specification**

MBP Rabbit pAb - Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	P81558
Reactivity	Pig
Host	Rabbit
Clonality	Polyclonal
Calculated MW	33 KDa
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from Gpig MBP
Epitope Specificity	69-85/167
Isotype	IgG
Purity	
affinity purified by Protein A	
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Myelin membrane; Peripheral membrane protein; Cytoplasmic side. Note=Cytoplasmic side of myelin. Belongs to the myelin basic protein family. Homodimer. Isoform 3 exists as a homodimer.
SIMILARITY	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).
SUBUNIT	Arg-241 was found to be 6% monomethylated and 60% symmetrically dimethylated. Phosphorylated by TAOK2, VRK2, MAPK11, MAPK12, MAPK14 and MINK1.
Post-translational modifications	
Important Note	This product as supplied is intended for

**research use only, not for use in human,
therapeutic or diagnostic applications.**

Background Descriptions

Oligodendrocyte Marker The classic group of Myelin basic protein (MBP) isoforms (isoforms 4 to 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 (isoforms 1 to 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 to optional posttranslational modifications give a wide spectrum of isomers, each of them having maybe a specialized function.

MBP Rabbit pAb - Additional Information

Other Names

Myelin basic protein, MBP, MBP

Target/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.

Dilution

WB~1:1000
IHC-P~N/A
IHC-F~N/A
IF~1:50~200
E~N/A

Format

0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

Storage

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

MBP Rabbit pAb - Protein Information

Name MBP

Function

Is, with PLP, the most abundant protein component of the myelin membrane in the CNS. Has a role in both the formation and stabilization of this compact multilayer arrangement of bilayers. Each splice variant and charge isomer may have a specialized function in the assembly of an optimized, biochemically functional myelin membrane (By similarity).

Cellular Location

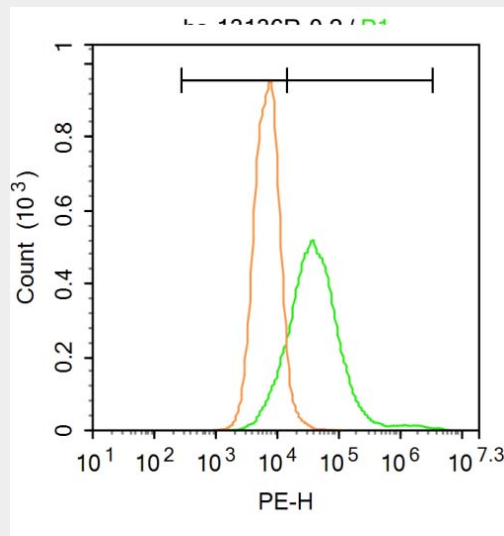
Myelin membrane; Peripheral membrane protein; Cytoplasmic side. Note=Cytoplasmic side of myelin

MBP Rabbit pAb - Protocols

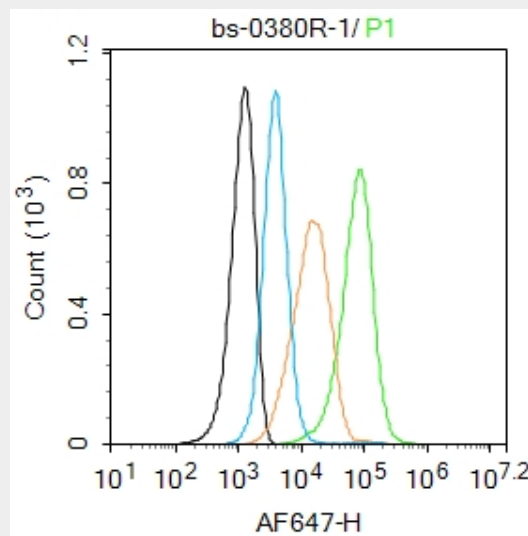
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

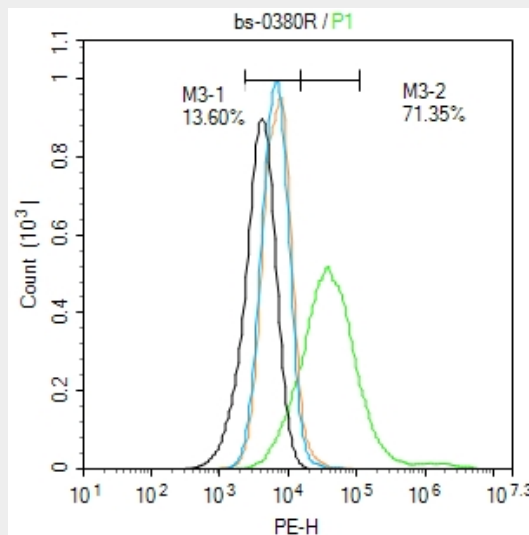
MBP Rabbit pAb - Images



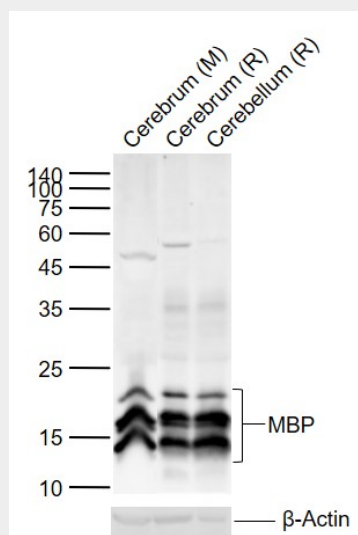
Blank control: A549. Primary Antibody (green line): Rabbit Anti-MBP antibody (AP94708) Dilution: 1 μ g /10⁶ cells; Isotype Control Antibody (orange line): Rabbit IgG . Secondary Antibody : Goat anti-rabbit IgG-PE Dilution: 1 μ g /test. Protocol The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with PBST for 20 min at room temperature. The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.



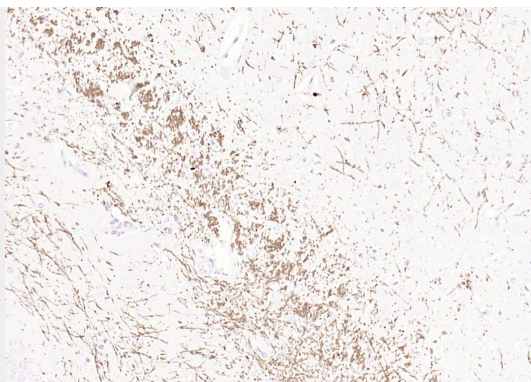
Blank control:U937. Primary Antibody (green line): Rabbit Anti-MBP antibody (AP94708) Dilution: 1 μg / 10^6 cells; Isotype Control Antibody (orange line): Rabbit IgG . Secondary Antibody : Goat anti-rabbit IgG-AF647 Dilution: 1 μg /test. Protocol The cells were incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.



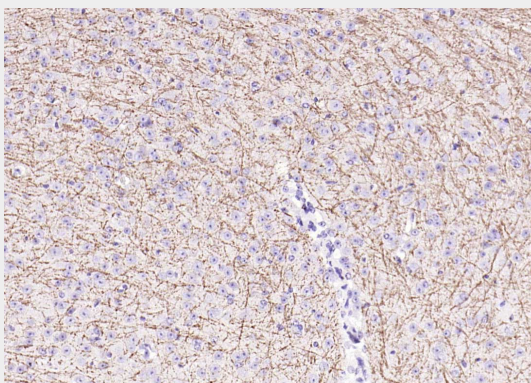
Blank control:A549. Primary Antibody (green line): Rabbit Anti-MBP antibody (AP94708) Dilution: 1 μg / 10^6 cells; Isotype Control Antibody (orange line): Rabbit IgG . Secondary Antibody : Goat anti-rabbit IgG-PE Dilution:1 μg /test. Protocol The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 20% PBST for 20 min at room temperature. The cells were then incubated in 5% BSA to block non-specific protein-protein interactions for 30 min at at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.



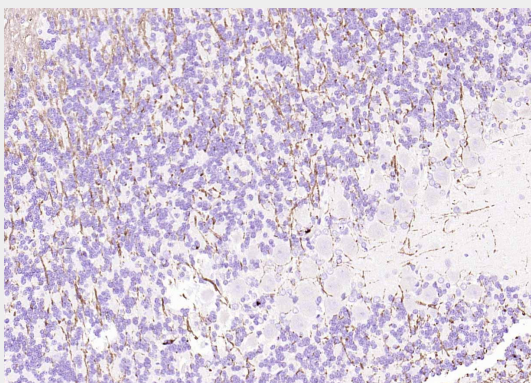
25 μg total protein per lane of various lysates (see on figure) probed with MBP polyclonal antibody, unconjugated (AP94708) at 1:1000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at r.t. for 60 min.



Paraformaldehyde-fixed, paraffin embedded Mouse Cerebrum; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with MBP Polyclonal Antibody, Unconjugated (AP94708) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit, SP-0023) and DAB (C-0010) staining.



Paraformaldehyde-fixed, paraffin embedded Mouse Cerebellum; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with MBP Polyclonal Antibody, Unconjugated (AP94708) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit, SP-0023) and DAB (C-0010) staining.



Paraformaldehyde-fixed, paraffin embedded Rat Cerebellum; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with MBP Polyclonal Antibody, Unconjugated (AP94708) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit, SP-0023) and DAB (C-0010) staining.

MBP Rabbit pAb - Background

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