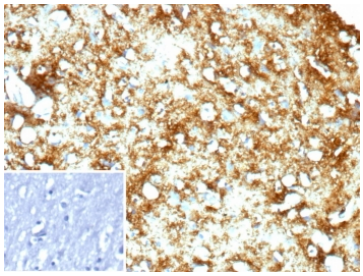
MBP Antibody / Myelin basic protein [clone rMBP/9431] (V5763)

Catalog No.	Formulation	Size
V5763-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5763-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5763SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

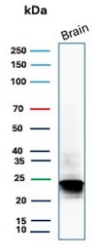
Recombinant MOUSE MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG2b, kappa
Clone Name	rMBP/9431
Purity	Protein G affinity
UniProt	P02686
Localization	Cell membrane, Myelin membrane
Applications	Immunohistochemistry (FFPE): 1-2ug/ml Western blot: 2-4ug/ml
Limitations	This MBP antibody is available for research use only.



Immunohistochemistry analysis of recombinant MBP / Myelin basic protein antibody (clone rMBP/9431) in human brain tissue. Formalin-fixed, paraffin-embedded human brain tissue was stained using recombinant MBP antibody (clone rMBP/9431). Heat-induced epitope retrieval was performed by boiling tissue sections in 10mM Tris with 1mM EDTA, pH 9.0, for 20 minutes followed by cooling prior to antibody incubation. Strong cytoplasmic and fiber-like staining is observed throughout white matter regions, highlighting myelinated axonal tracts, while neuronal cell bodies demonstrate minimal staining. The inset image represents a secondary-only negative control using PBS in place of primary antibody and shows absence of specific immunoreactivity.



Western blot testing of human brain tissue lysate with recombinant MBP antibody (clone rMBP/9431). Predicted molecular weight: ~22 kDa, ~33 kDa (two isoforms).

Description

MBP Antibody recognizes Myelin basic protein, a major structural component of the myelin sheath in the central nervous system. Myelin basic protein antibody is widely used in neuroscience research as a marker of myelinating oligodendrocytes and compact myelin. Encoded by the MBP gene, Myelin basic protein plays a critical role in myelin membrane compaction and stabilization of the multilayered myelin sheath surrounding axons.

Myelin basic protein is localized to the cytoplasmic face of the myelin membrane and is highly expressed in oligodendrocytes in the central nervous system and in Schwann cells in the peripheral nervous system. MBP antibody is commonly used to evaluate white matter integrity, axonal insulation, and oligodendrocyte differentiation. The protein contributes to adhesion of cytoplasmic leaflets within myelin, enabling formation of dense compact myelin necessary for rapid nerve conduction.

Alterations in Myelin basic protein expression have been associated with demyelinating diseases such as multiple sclerosis, leukodystrophies, traumatic brain injury, and other neuroinflammatory conditions. Decreased MBP expression may reflect myelin loss, while abnormal distribution can indicate active demyelination or remyelination processes. For this reason, MBP Antibody is frequently applied in studies of neurodegeneration, central nervous system injury, and therapeutic remyelination strategies.

Myelin basic protein exists in multiple alternatively spliced isoforms, with the 18.5 kDa isoform being one of the most studied components of compact myelin. Post-translational modifications including phosphorylation and deimination influence its structural properties and interaction with lipid membranes. MBP Antibody provides a reliable tool for assessing myelin structure, oligodendrocyte biology, and white matter pathology in both normal and disease contexts.

For broader research on myelin structure and MBP expression, see our Myelin Basic Protein Antibody / CNS Myelin Marker page.

Application Notes

Optimal dilution of the MBP antibody should be determined by the researcher.

Immunogen

A portion of amino acids 1-100 from human Myelin basic protein was used as the immunogen for the MBP antibody.

Storage

Aliquot the MBP antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

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