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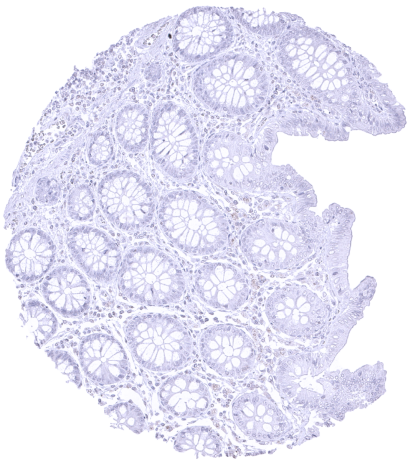
Anti Myelin Basic Protein (MBP) Antibody
MSVA-390R / Recombinant Rabbit monoclonal

Human SwissProt	P02686
Human Gene Symbol	MBP
Synonyms	GDB; Golli MBP; myelin basic protein; Hemopoietic MBP; HMBPR; HUGO; MLD; Myelin A1 Protein, basic; Myelin Deficient; Myelin membrane encephalitogenic protein; SHI; Shiverer; SP
Specificity	MBP
Immunogen	Recombinant fragment of human MBP protein
Isotype	Rabbit / IgG
Species Reactivity	Human

Localization	Cell surface. Cytoplasm
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide.
Positive Control	Brain: A fibrillar staining pattern should be seen.
Negative Control	Colon: MBP staining should be completely absent.

In the cerebellum a fibrillar MBP immunostaining occurs along intracerebral axons.



Complete absence of MBP immunostaining in epithelial and stromal cells of the appendix mucosa.

In the cerebrum a fibrillar MBP immunostaining occurs along intracerebral axons. Neurons are not stained.

Biology

Myelin basic protein (MBP) is coded by the MBP gene on 18q22. It is produced by oligodendrocytes and plays a relevant role in the myelination of nerves in the nervous system by adhering the cytoplasmic leaflets of the oligodendrocyte (OLG) membrane to each other. MBP maintains the correct structure of myelin, interacts with the lipids in the myelin membrane and forms a 'molecular sieve' that restricts diffusion of some membrane proteins from paranodal loops into compact myelin. The gene is characterized by multiple splice variants and a large number of post-translational modifications of the protein, including phosphorylation, methylation, deamidation, citrullination, ADP-ribosylation, and N-terminal acylation. The most common form of MBP is about 18.5 kDa. MBP interacts with various small ligands and proteins. Alterations in these post-translational modifications have been associated with demyelinating diseases. MBP isolated from individuals with multiple sclerosis have had a higher degree of citrullination and a smaller positive charge. In normal tissues. MBP is only seen in the brain where MBP immunostaining results in a fibrillar pattern along intracerebral axons. MBP is expressed in oligodendrocytes at late stage of cell differentiation. Among tumors, MBP immunostaining is particularly seen in oligodendroglioma and oligoastrocytomas. MBP has been described to be occasionally expressed in teratomas but is otherwise not seen in extracranial tumors.

Applications

-MBP is pivotal in research projects that involve an assessment of the status of myelinization of intracranial axons.

Protocol Suggestions

Dilution: 1:75; pH 7,8 is optimal. Freshly cut sections should be used (less than 10 days between cutting and staining deteriorates staining intensity for most antibodies in IHC).

Limitations

This antibody is available for **research use only** and is not approved for use in diagnostics.

Warranty

There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product. Not for resale without express authorization.

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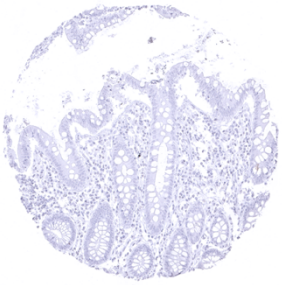
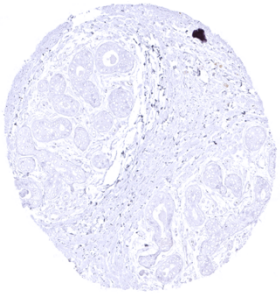
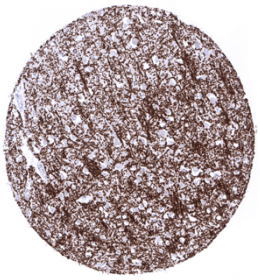
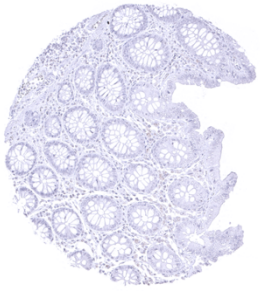
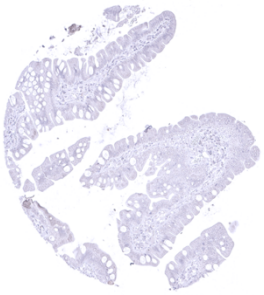

Appendix, mucosa

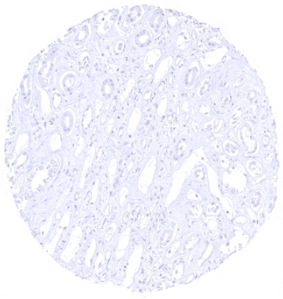

Breast

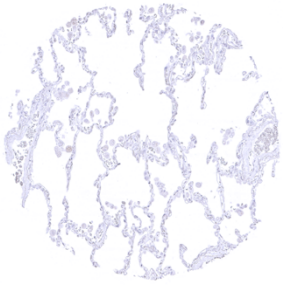

Cerebrum, grey

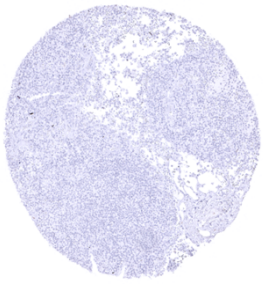

Cerebrum, white

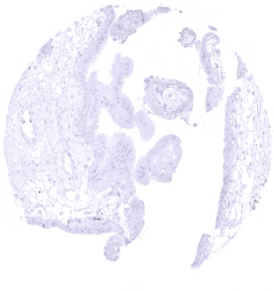

Colon descendens, mucosa

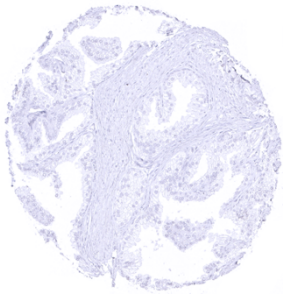

Ileum, mucosa

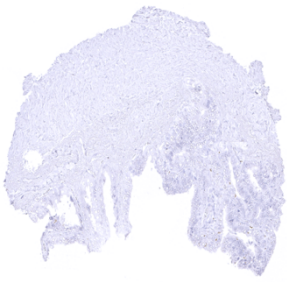

Kidney, medulla

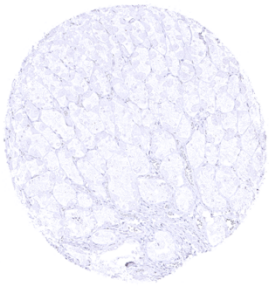

Lung

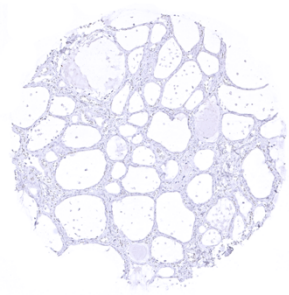

Lymph node


Placenta, early

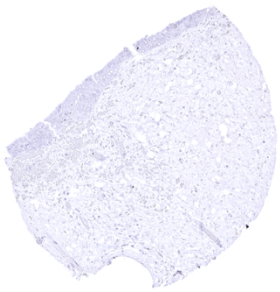

Prostate


Seminal vesicle


Stomach, corpus


Thyroid gland


Tonsil


Urinary bladder, urothelium