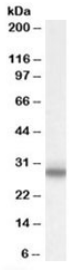
Myelin Protein Zero Antibody / MPZ (R33475)

Catalog No.	Formulation	Size
R33475-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Predicted Reactivity	Dog
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	4359
Applications	Western blot: 0.1-0.3ug/ml ELISA (peptide) LOD: 1:32000
Limitations	This Myelin Protein Zero antibody is available for research use only.



Myelin Protein Zero Antibody Rat Spinal Cord WB. Western blot analysis of rat spinal cord lysate using Myelin Protein Zero Antibody. A distinct immunoreactive band is detected at approximately 28 kDa, consistent with the expected molecular weight of MPZ (Myelin Protein Zero/P0). MPZ is the major structural protein of peripheral myelin and functions as a critical adhesion molecule required for myelin compaction, axonal insulation, and normal nerve conduction. Detection of endogenous MPZ in spinal cord-associated nervous tissue demonstrates the utility of this antibody for western blot analysis of myelin-related proteins.

Description

Myelin Protein Zero Antibody recognizes Myelin Protein Zero (MPZ, P0), the major structural protein of peripheral nervous system myelin. MPZ is a transmembrane glycoprotein belonging to the immunoglobulin superfamily and functions as a homophilic adhesion molecule that promotes tight interactions between adjacent layers of the myelin sheath. Through these adhesive properties, MPZ is essential for myelin compaction, axonal insulation, and efficient nerve impulse

conduction. Because it represents the most abundant protein component of peripheral myelin, MPZ serves as a fundamental marker for studies of myelin biology and peripheral nerve function.

Myelin Protein Zero Antibody is widely used for investigating myelination and Schwann cell biology. During peripheral nervous system development, Schwann cells synthesize multilamellar myelin membranes that wrap axons and enable rapid saltatory conduction. MPZ plays a central role in establishing and maintaining the highly organized structure of compact myelin, making it an important indicator of Schwann cell differentiation and myelin maturation. As a result, MPZ expression is frequently examined in studies of nerve development, axon-glia interactions, and peripheral nervous system organization.

Myelin Protein Zero Antibody is also valuable for research involving nerve injury and regeneration. Following peripheral nerve damage, Schwann cells participate in axonal support, tissue remodeling, and remyelination. Restoration of normal MPZ expression is an important component of successful nerve repair, and therefore MPZ is commonly used as a marker for evaluating regenerative responses and remyelination efficiency. Analysis of MPZ expression can provide important insights into the molecular mechanisms that support recovery of peripheral nerve function after injury.

Myelin Protein Zero Antibody has significant importance in neurological disease research. Mutations in the MPZ gene are associated with several inherited demyelinating neuropathies, including Charcot-Marie-Tooth disease, Dejerine-Sottas syndrome, and congenital hypomyelinating neuropathy. These disorders are characterized by abnormalities in myelin structure, impaired nerve conduction, and progressive neurological dysfunction. Consequently, MPZ remains an important biomarker for studies of peripheral neuropathy pathogenesis and therapeutic development.

Myelin Protein Zero Antibody supports research involving myelination, peripheral nerve development, Schwann cell differentiation, nerve regeneration, and inherited neurological disorders. Because MPZ is indispensable for the formation and maintenance of compact peripheral myelin, it remains one of the most extensively studied proteins in peripheral nervous system biology and translational neuroscience research.

Researchers studying myelination, peripheral nerve biology, and myelin structure may also be interested in our MPZ Antibody / Myelin Structural Protein Antibody.

Application Notes

Optimal dilution of the Myelin Protein Zero antibody should be determined by the researcher.

Immunogen

Amino acids DHSRSTKAVSEK were used as the immunogen for this Myelin Protein Zero antibody.

Storage

Aliquot and store the Myelin Protein Zero antibody at -20oC.

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