abcam

Product datasheet

Anti-Myelin Protein Zero antibody ab39375

★★★★★ 2 Abreviews 14 References 2 Images

Overview

Product name	Anti-Myelin Protein Zero antibody
Description	Chicken polyclonal to Myelin Protein Zero
Host species	Chicken
Tested applications	**Suitable for:** IHC-Fr, WB
Species reactivity	**Reacts with:** Mouse, Human
Immunogen	Synthetic peptide; sequence common to mouse and human Myelin Protein Zero.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.02% Sodium azide Constituent: PBS
Purification notes	IgY fractions were then affinity-purified using a peptide column.
Clonality	Polyclonal
Isotype	IgY

Applications

The Abpromise guarantee	Our **Abpromise guarantee** covers the use of ab39375 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-Fr		1/100 - 1/200.
WB		1/250 - 1/500. Predicted molecular weight: 28 kDa.

Target

Function

Creation of an extracellular membrane face which guides the wrapping process and ultimately compacts adjacent lamellae.

Tissue specificity

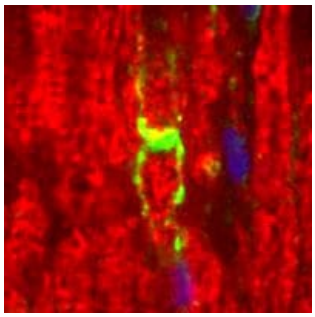
Found only in peripheral nervous system Schwann cells.

Involvement in disease

Defects in MPZ are the cause of Charcot-Marie-Tooth disease type 1B (CMT1B) [MIM:118200]. CMT1B is a form of Charcot-Marie-Tooth disease, the most common inherited disorder of the peripheral nervous system. Charcot-Marie-Tooth disease is classified in two main groups on the basis of electrophysiologic properties and histopathology: primary peripheral demyelinating neuropathy or CMT1, and primary peripheral axonal neuropathy or CMT2. Neuropathies of the CMT1 group are characterized by severely reduced nerve conduction velocities (less than 38 m/sec), segmental demyelination and remyelination with onion bulb formations on nerve biopsy, slowly progressive distal muscle atrophy and weakness, absent deep tendon reflexes, and hollow feet.
Defects in MPZ are the cause of Charcot-Marie-Tooth disease type 2I (CMT2I) [MIM:607677]. CMT2I is a form of Charcot-Marie-Tooth disease, the most common inherited disorder of the peripheral nervous system. Charcot-Marie-Tooth disease is classified in two main groups on the basis of electrophysiologic properties and histopathology: primary peripheral demyelinating neuropathy or CMT1, and primary peripheral axonal neuropathy or CMT2. Neuropathies of the CMT2 group are characterized by signs of axonal regeneration in the absence of obvious myelin alterations, normal or slightly reduced nerve conduction velocities, and progressive distal muscle weakness and atrophy. CMT2I is characterized by late onset (range 47 to 60 years).
Defects in MPZ are the cause of Charcot-Marie-Tooth disease type 2J (CMT2J) [MIM:607736]. CMT2J is a form of Charcot-Marie-Tooth disease characterized by the association of axonal peripheral neuropathy with hearing loss and pupillary abnormalities such as Adie pupil. Inheritance is autosomal dominant.
Defects in MPZ are the cause of Adie pupil (ADIEP) [MIM:103100]. A stationary, benign disorder characterized by tonic, sluggishly reacting pupil and hypoactive or absent tendon reflexes. Adie pupil is a characteristic of Charcot-Marie-Tooth disease type 2J.
Defects in MPZ may be the cause of Charcot-Marie-Tooth disease dominant intermediate type D (CMTDID) [MIM:607791]. CMTDID is a form of Charcot-Marie-Tooth disease characterized by features intermediate between demyelinating and axonal peripheral neuropathies, and motor median nerve conduction velocities ranging from 25 to 45 m/sec.
Defects in MPZ are a cause of Dejerine-Sottas syndrome (DSS) [MIM:145900]; also known as Dejerine-Sottas neuropathy (DSN) or hereditary motor and sensory neuropathy III (HMSN3). DSS is a severe degenerating neuropathy of the demyelinating Charcot-Marie-Tooth disease category, with onset by age 2 years. DSS is characterized by motor and sensory neuropathy with very slow nerve conduction velocities, increased cerebrospinal fluid protein concentrations, hypertrophic nerve changes, delayed age of walking as well as areflexia. There are both autosomal dominant and autosomal recessive forms of Dejerine-Sottas syndrome.
Defects in MPZ are a cause of congenital hypomyelination neuropathy (CHN) [MIM:605253]. CHN is characterized clinically by early onset of hypotonia, areflexia, distal muscle weakness, and very slow nerve conduction velocities.

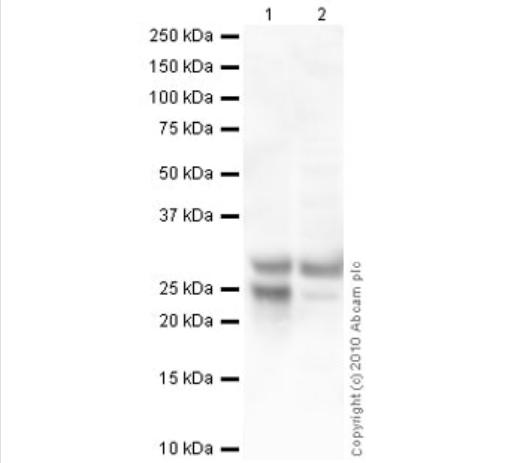
	Defects in MPZ are a cause of Roussy-Levy syndrome (ROULS) [MIM:180800]; also known as Roussy-Levy hereditary areflexic dystasia. This autosomal dominant disorder resembles Charcot-Marie-Tooth disease type 1 in that it presents with foot deformity, weakness and atrophy of distal limb muscles, especially the peronei, and absent tendon reflexes. The phenotype differs, however, in that it includes static tremor of the upper limbs and gait ataxia.
Sequence similarities	Belongs to the myelin P0 protein family. Contains 1 Ig-like V-type (immunoglobulin-like) domain.
Post-translational modifications	N-glycosylated; contains sulfate-substituted glycan.
Cellular localization	Membrane.

Images



Immunohistochemistry (Frozen sections) - Anti-Myelin Protein Zero antibody (ab39375)

A tissue section through an adult sciatic nerve. Myelin Protein Zero (green staining) can be seen in the myelin and Schwann cell processes surrounding the nodes of Ranvier. In this photomicrograph, rabbit antibodies against LAMP (lysozome-associated membrane glycoprotein) (red staining) serves as the counterstain, and DAPI (blue staining) allows visualization of nuclei.



Western blot - Anti-Myelin Protein Zero antibody (ab39375)

All lanes : Anti-Myelin Protein Zero antibody (ab39375) at 1 µg/ml

Lane 1 : Human spinal cord tissue lysate - total protein (**ab29188**)
Lane 2 : Spinal Cord (Mouse) Tissue Lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat polyclonal Secondary Antibody to Chicken IgY - H&L (HRP) at 1/3000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 28 kDa
Observed band size: 25,28 kDa

Exposure time: 30 seconds

The band observed at 25 kDa could potentially be a cleaved form of Myelin Protein Zero due to the presence of a 29 amino acid signal peptide.

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