Product datasheet

Anti-PMP22 antibody ab61220

Overview

Product name  Anti-PMP22 antibody
Description  Rabbit polyclonal to PMP22
Host species  Rabbit
Specificity  ab61220 detects endogenous levels of total PMP22 protein.
Tested applications  Suitable for: ELISA, IHC-P, WB, ICC/IF
Species reactivity  Reacts with: Mouse, Rat, Human
Immunogen  Synthetic peptide corresponding to Human PMP22 aa 111-160.
Database link: Q01453
Positive control  WB: Extracts from MDA-MB-435 cells IHC: Human brain tissue ICC/IF: PC12 cells

Properties

Form  Liquid
Storage instructions  Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer  pH: 7.40
Preservative: 0.02% Sodium azide
Constituents: PBS, 50% Glycerol, 0.87% Sodium chloride
Phosphate buffered saline (without Mg2+ and Ca2+)

Purity  Immunogen affinity purified
Purification notes  The antibody was purified from rabbit antiserum.
Clonality  Polyclonal
Isotype  IgG

Applications

Our Abpromise guarantee covers the use of ab61220 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
Function
Might be involved in growth regulation, and in myelination in the peripheral nervous system.

Involvement in disease
Defects in PMP22 are the cause of Charcot-Marie-Tooth disease type 1A (CMT1A) [MIM:118220]; also known as hereditary motor and sensory neuropathy IA. CMT1A 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. CMT1A inheritance is autosomal dominant.
Defects in PMP22 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 PMP22 are a cause of hereditary neuropathy with liability to pressure palsies (HNPP) [MIM:162500]; an autosomal dominant disorder characterized by transient episodes of decreased perception or peripheral nerve palsies after slight traction, compression or minor traumas.
Defects in PMP22 are the cause of Charcot-Marie-Tooth disease type 1E (CMT1E) [MIM:118300]; also known as Charcot-Marie-Tooth disease and deafness autosomal dominant. CMT1E is an autosomal dominant form of Charcot-Marie-Tooth disease characterized by the association of sensorineural hearing loss with peripheral demyelinating neuropathy.
Defects in PMP22 may be a cause of inflammatory demyelinating polyneuropathy (IDP) [MIM:139393]. IDP is a putative autoimmune disorder presenting in an acute (AIDP) or chronic form (CIDP). The acute form is also known as Guillain-Barre syndrome.

Sequence similarities
Belongs to the PMP-22/EMP/MP20 family.

Cellular localization
Membrane.

Target

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<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<td>ELISA</td>
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<td>IHC-P</td>
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<td>WB</td>
<td><strong>⭐⭐⭐⭐</strong></td>
<td>1/500 - 1/1000. Detects a band of approximately 19 kDa (predicted molecular weight: 17 kDa).</td>
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<tr>
<td>ICC/IF</td>
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<td>Use a concentration of 1 mg/ml.</td>
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Western blot - Anti-PMP22 antibody (ab61220)

All lanes: Anti-PMP22 antibody (ab61220) at 1/500 dilution

Lane 1: extracts from MDA-MB-435 cells
Lane 2: extracts from MDA-MB-435 cells with the immunizing peptide at 5 µg

Lysates/proteins at 5 µg per lane.

Predicted band size: 17 kDa
Observed band size: 19 kDa

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PMP22 antibody (ab61220)

Ab61220 at 1/50 dilution staining human brain (Left apical lobe) without (left) and with (right) immunizing peptide; paraffin embedded.

Immunocytochemistry/ Immunofluorescence - Anti-PMP22 antibody (ab61220)

ICC/IF image of ab61220 stained PC12 cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab61220, 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor®488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor®594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

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