abcam

Product datasheet

Anti-PMP22 antibody [EPR23112-110] ab270400

Recombinant RabMAb

1 Abreviews 1 References 8 Images

Overview

Product name	Anti-PMP22 antibody [EPR23112-110]
Description	Rabbit monoclonal [EPR23112-110] to PMP22
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P, ICC/IF, IP, Flow Cyt
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Human leg nerve tissue lysate and 293T transfected with PMP22 (WT) expression vector containing a myc-His-tag, whole cell lysate. IHC-P: Human nerve tissue. ICC/IF: 293T transfected with myc-his tagged PMP22 overexpression construct cells. Flow Cyt: 293T transfected with myc-his tagged PMP22 overexpression construct cells. IP: 293T transfected with myc-his tagged PMP22 overexpression construct cells.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal

Clone number	EPR23112-110
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab270400 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
WB	★☆☆☆☆ (1)	1/1000. Predicted molecular weight: 18 kDa.
IHC-P		1/32000. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
ICC/IF		1/250.
IP		1/30.
Flow Cyt		1/600.

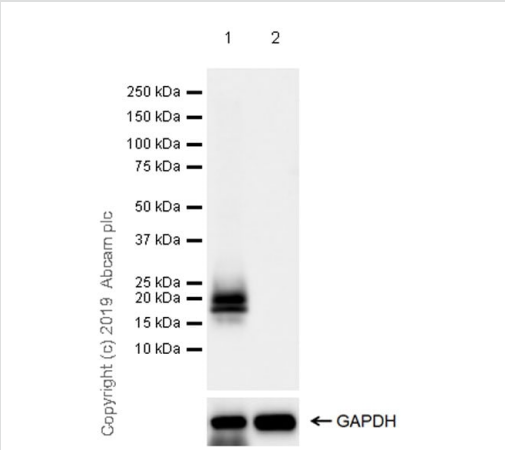
Target

Function Might be involved in growth regulation, and in myelinization 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.

Images



Western blot - Anti-PMP22 antibody [EPR23112-110] (ab270400)

All lanes : Anti-PMP22 antibody [EPR23112-110] (ab270400) at 1/1000 dilution

Lane 1 : Human leg nerve tissue lysate
Lane 2 : Human brain tissue lysate

Lysates/proteins at 20 µg per lane.

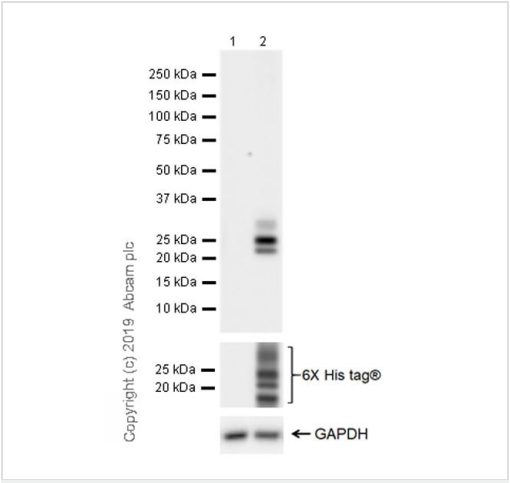
Secondary
All lanes : VeriBlot for IP Detection Reagent (HRP) (**ab131366**) at 1/1000 dilution

Predicted band size: 18 kDa
Observed band size: 18,22 kDa

Exposure time: 3 seconds

The expression profile observed is consistent with what has been described in the literature (PMID: 25429154; 7649472).
Negative control: Human brain (PMID: 7649472).

Blocking/diluting buffer and concentration: 5% NFDM/TBST



Western blot - Anti-PMP22 antibody [EPR23112-110] (ab270400)

All lanes : Anti-PMP22 antibody [EPR23112-110] (ab270400) at 1/1000 dilution

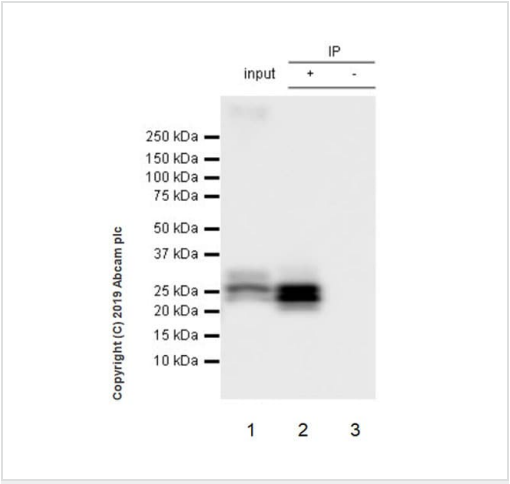
Lane 1 : 293T (human embryonic kidney epithelial cell) transfected with an empty vector (vector control) containing a myc-His-tag®, whole cell lysate
Lane 2 : 293T transfected with PMP22 (WT) expression vector containing a myc-His-tag®, whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : VeriBlot for IP Detection Reagent (HRP) (**ab131366**) at 1/1000 dilution

Predicted band size: 18 kDa
Observed band size: 18,20 kDa

Exposure time: 15 seconds



Immunoprecipitation - Anti-PMP22 antibody [EPR23112-110] (ab270400)

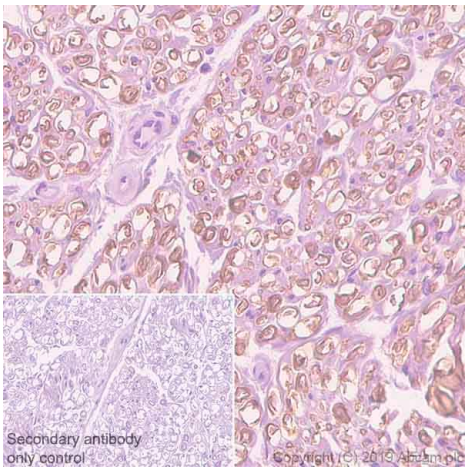
PMP22 was immunoprecipitated from 0.35 mg 293T (human embryonic kidney epithelial cell) transfected with PMP22 (WT) expression vector containing a myc-His-tag®, whole cell lysate with ab270400 at 1/30 dilution (2 µg in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab270400 1/1000 dilution (0.58 µg/ml). VeriBlot for IP Detection Reagent (HRP) (**ab131366**) was used at 1/5000 dilution.

Lane 1: 293T cells transfected with PMP22 (WT) expression vector containing a myc-His-tag®, whole cell lysate 10 µg

Lane 2: ab270400 IP in 293T transfected with PMP22 (WT) expression vector containing a myc-His-tag®, whole cell lysate

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of ab270400 in 293T transfected with PMP22 (WT) expression vector containing a myc-His-tag®, whole cell lysate. Blocking and dilution buffer and concentration: 5% NFDM/TBST.

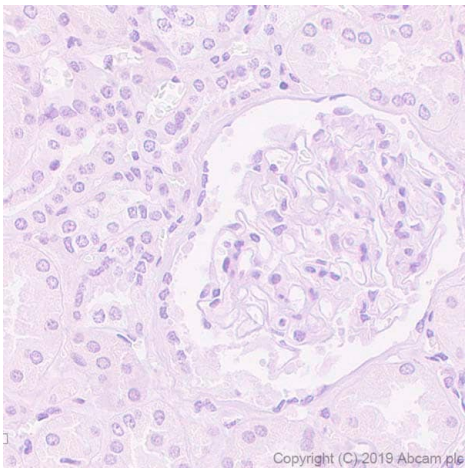
Exposure time: 3 seconds



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PMP22 antibody [EPR23112-110] (ab270400)

Immunohistochemical analysis of paraffin-embedded Human nerve tissue labeling PMP22 with ab270400 at 1/32000 dilution (0.018 µg/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining in Schwann cells of human nerve (PMID:7691737) is observed. The section was incubated with ab270400 for 10 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

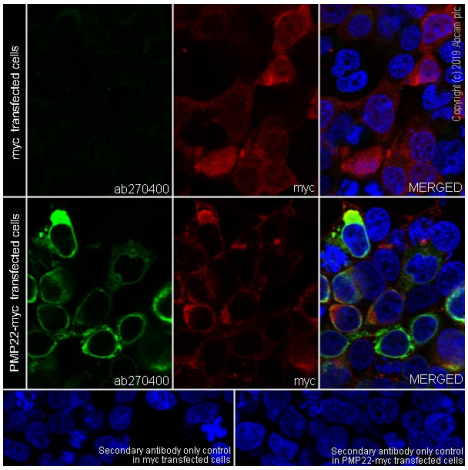


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PMP22 antibody [EPR23112-110] (ab270400)

Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling PMP22 with ab270400 at 1/32000 dilution (0.018 µg/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Negative control: negative staining in human kidney (PMID:7649472).

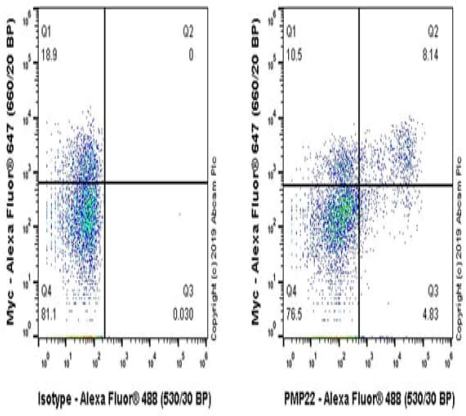
The section was incubated with ab270400 for 10 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins. Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).



Immunocytochemistry/ Immunofluorescence - Anti-PMP22 antibody [EPR23112-110] (ab270400)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized 293T cells transfected with a myc-tagged PMP22 expression construct. cells labelling PMP22 with ab270400 at 1/250 dilution, followed by **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing cytoplasmic staining in 293T cells transfected with a myc-tagged PMP22 expression construct is observed. 2233S Myc-Tag (9B11) Mouse mAb (Alexa Fluor® 647 Conjugate) was used to counterstain tubulin at 1/100 dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.



Flow Cytometry - Anti-PMP22 antibody [EPR23112-110] (ab270400)

Flow cytometric analysis of 2% paraformaldehyde fixed 0.1% Tween-20 permeabilized 293T transfected with myc-his tagged PMP22 overexpression construct cells labelling PMP22 with ab270400 at 1/600 dilution (0.1 ug)/ Right compared with a Rabbit monoclonal IgG (**ab172730**) / Left isotype control. A Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) at 1/2000 dilution was used as the secondary antibody. Cells were surface stained with isotype control or ab270400. Then fixed with 2% PFA for 10min followed by intracellularly stained with anti-myc tag conjugated to Alexa Fluor® 647.

Anti-PMP22 antibody [EPR23112-110] (ab270400)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors