abcam

Product datasheet

Anti-PGP9.5 antibody [EPR4117] ab109261

KO VALIDATED   Recombinant   RabMAb
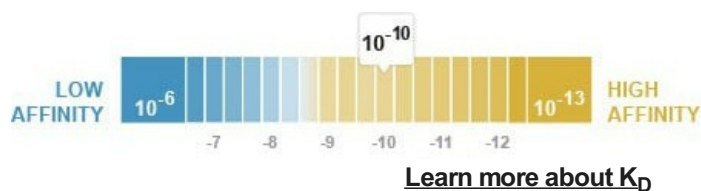
★★★☆☆ **5 Abreviews**   **4 References**   6 Images

Overview

Product name	Anti-PGP9.5 antibody [EPR4117]
Description	Rabbit monoclonal [EPR4117] to PGP9.5
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P **Unsuitable for:** Flow Cyt
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat ⚠
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	Fetal brain, Y79, U-87 MG, HAP1 and SH SY5Y lysates; Human brain tissue.
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 -20°C. Stable for 12 months at -20°C.
Dissociation constant (K_D)	$K_D = 7.20 \times 10^{-10}$ M

$$10^{-10}$$

LOW AFFINITY 10^{-6} ——— 10^{-13} HIGH AFFINITY

-7 -8 -9 -10 -11 -12

Learn more about K_D

Storage buffer	pH: 7.20

Preservative: 0.01% Sodium azide
Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture supernatant

Purity	Tissue culture supernatant
Clonality	Monoclonal
Clone number	EPR4117
Isotype	IgG

Applications

The Abpromise guarantee   Our **Abpromise guarantee** covers the use of ab109261 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	★★★★★ (2)	1/1000 - 1/10000. Detects a band of approximately 25 kDa (predicted molecular weight: 24 kDa).
IHC-P	★★☆☆☆ (3)	1/50 - 1/100. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. Perform antigen retrieval before commencing with IHC staining protocol

Application notes   Is unsuitable for Flow Cyt.

Target

Function   Ubiquitin-protein hydrolase involved both in the processing of ubiquitin precursors and of ubiquitinated proteins. This enzyme is a thiol protease that recognizes and hydrolyzes a peptide bond at the C-terminal glycine of ubiquitin. Also binds to free monoubiquitin and may prevent its degradation in lysosomes. The homodimer may have ATP-independent ubiquitin ligase activity.

Tissue specificity   Found in neuronal cell bodies and processes throughout the neocortex (at protein level). Expressed in neurons and cells of the diffuse neuroendocrine system and their tumors. Weakly expressed in ovary. Down-regulated in brains from Parkinson disease and Alzheimer disease patients.
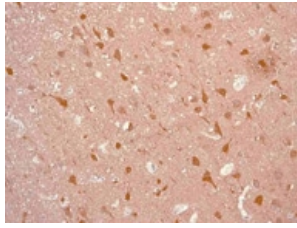
Involvement in disease   Parkinson disease 5
Neurodegeneration with optic atrophy, childhood-onset

Sequence similarities   Belongs to the peptidase C12 family.

Post-translational modifications   O-glycosylated.

Cellular localization   Cytoplasm. Endoplasmic reticulum membrane. About 30% of total UCHL1 is associated with membranes in brain.
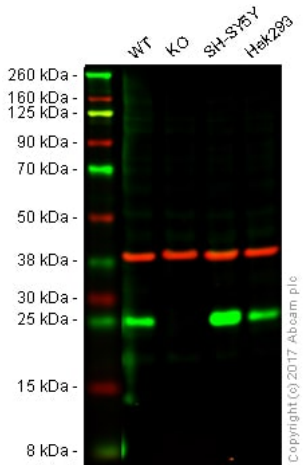
Images

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PGP9.5 antibody [EPR4117] (ab109261)

ab109261 at 1/50 dilution staining PGP9.5 in Human brain by Immunohistochemistry, Paraffin-embedded tissue.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Western blot - Anti-PGP9.5 antibody [EPR4117] (ab109261)

**Lane 1:** Wild type HAP1 whole cell lysate (20 µg)
Lane 2: UCHL1 (KO) knockout HAP1 whole cell lysate (20 µg)
Lane 3: SH-SY5Y whole cell lysate (20 µg)
Lane 4: HEK293 whole cell lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - ab109261 observed at 24 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

ab109261 was shown to specifically react with UCHL1 (KO) in wild-type cells as signal was lost in UCHL1 (KO) knockout HAP1 cells. Wild-type and UCHL1 (KO) knockout samples were subjected to SDS-PAGE. ab109261 and **ab8245** (Mouse anti GAPDH loading control) were incubated overnight at 4°C at 1000 dilution and 1/10000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed **ab216773** and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed **ab216776** secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.
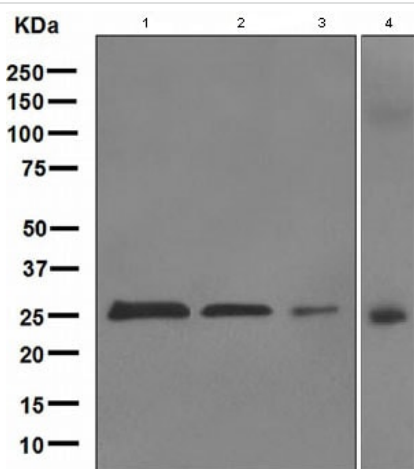
Western blot - Anti-PGP9.5 antibody [EPR4117] (ab109261)

All lanes : Anti-PGP9.5 antibody [EPR4117] (ab109261) at 1/1000 dilution
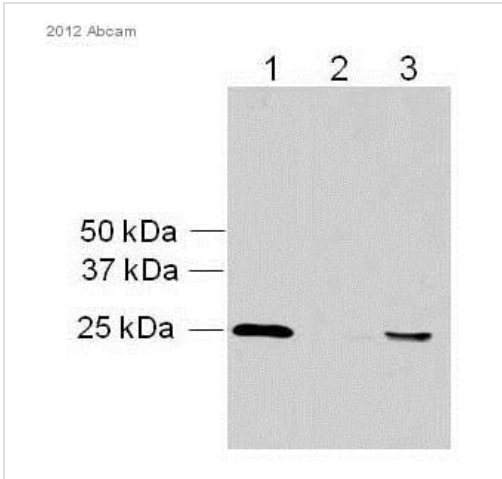
Lane 1 : Human fetal brain lysate
Lane 2 : Y79 lysate
Lane 3 : U-87 MG lysate
Lane 4 : SH SY5Y lysate

Lysates/proteins at 10 µg per lane.

Predicted band size: 24 kDa

Western blot - Anti-PGP9.5 antibody [EPR4117]
(ab109261)

Image courtesy of Dr Simone Diestel by Abreview.

All lanes : Anti-PGP9.5 antibody [EPR4117] (ab109261) at 1/1000 dilution

Lane 1 : Whole tissue lysate prepared from adult mouse brain homogenate (CD-1 strain)

Lane 2 : Whole tissue lysate prepared from non transfected control cells (low endogenous expression of UCH-L1)

Lane 3 : Whole tissue lysate prepared from cells transfected with UCH-L1-Flag cDNA (positive control)

Lysates/proteins at 100 µg per lane.

Secondary

All lanes : HRP conjugated goat anti-rabiit polyclonal at 1/10000 dilution
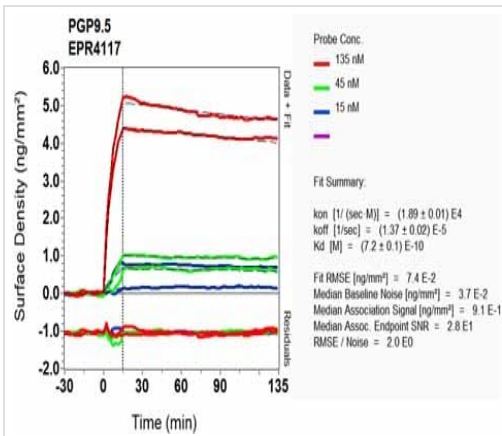
Developed using the ECL technique.

Predicted band size: 24 kDa

Exposure time: 2 minutes

Equilibrium disassociation constant (K_D)

Learn more about K_D

Click here to learn more about K_D

OI-RD Scanning - Anti-PGP9.5 antibody [EPR4117]
(ab109261)

Why choose a recombinant antibody?

Research with confidence
Consistent and reproducible results

Long-term and scalable supply
Recombinant technology

Success from the first experiment
Confirmed specificity

Ethical standards compliant
Animal-free production

Anti-PGP9.5 antibody [EPR4117] (ab109261)

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