

# Product Datasheet

## Myelin PLP Antibody NB100-74503

Unit Size: 100 uL

Store at -20C. Avoid freeze-thaw cycles.

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### Publications: 6

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**NB100-74503**

## Myelin PLP Antibody

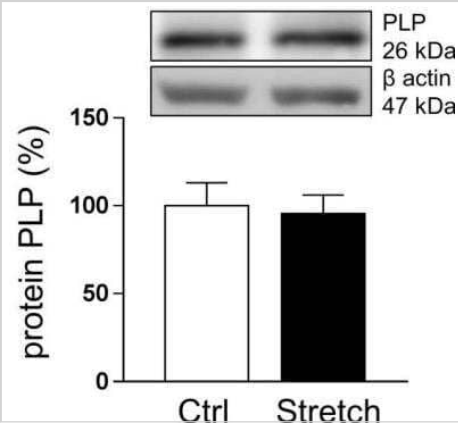
Product Information	
Unit Size	100 uL
Concentration	This product is unpurified. The exact concentration of antibody is not quantifiable.
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.05% Sodium Azide
Isotype	IgG
Purity	Unpurified
Buffer	Whole antisera

Product Description	
Host	Rabbit
Gene ID	5354
Gene Symbol	PLP1
Species	Mouse, Rat
Reactivity Notes	Rat reactivity reported in scientific literature (PMID: 20594620).
Marker	Oligodendrocyte Marker
Specificity/Sensitivity	PLP
Immunogen	Synthetic peptide corresponding to residues C(109) G K G L S A T V T G G Q K G R G S R G(128) of PLP.

Product Application Details	
Applications	Western Blot, Immunocytochemistry/ Immunofluorescence
Recommended Dilutions	Western Blot 1:1000, Immunocytochemistry/ Immunofluorescence
Application Notes	Useful in IHC and WB. WB: Detects an approx. 26 - 29 kDa protein representing the proteolipid protein in adult mouse brain samples. Use in Immunocytochemistry/immunofluorescence reported in scientific literature (PMID: 20594620).

**Images**

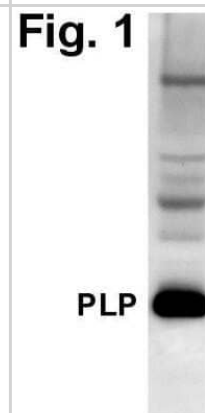
Western Blot: Myelin PLP Antibody [NB100-74503] - Proteins were extracted from control (Ctrl) and stretched (Stretch) 158N cells and western blot was performed for myelin protein PLP (26 kDa) following 20% of strain. Beta-Actin was used as a loading control. Results represent the mean +/- SEM of three independent experiments. Image collected and cropped by CiteAb from the following publication (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6505516/>) licensed under a CC-BY license.



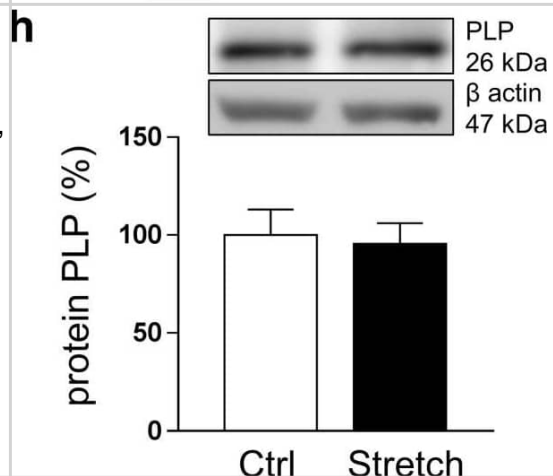
Western Blot: Myelin PLP Antibody [NB100-74503] - Figure 1 shows a Western blot of PLP in adult mouse brain samples using NB100-74503. Figure 2 shows an immunocytochemical staining of PLP in mouse brain thick section using NB100-74503. Staining (m) is limited to myelin tracts and oligodendrocytes.



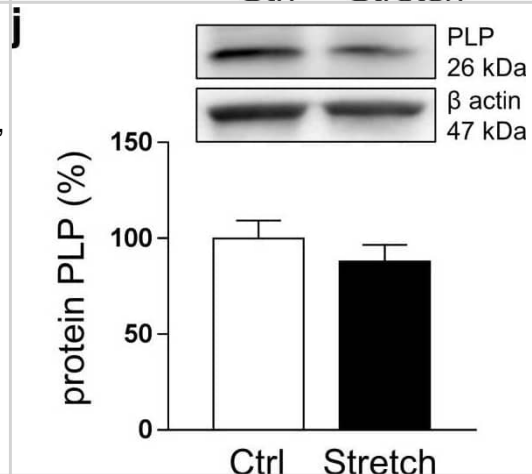
Western Blot: Myelin PLP Antibody [NB100-74503] - Analysis of adult mouse brain samples.



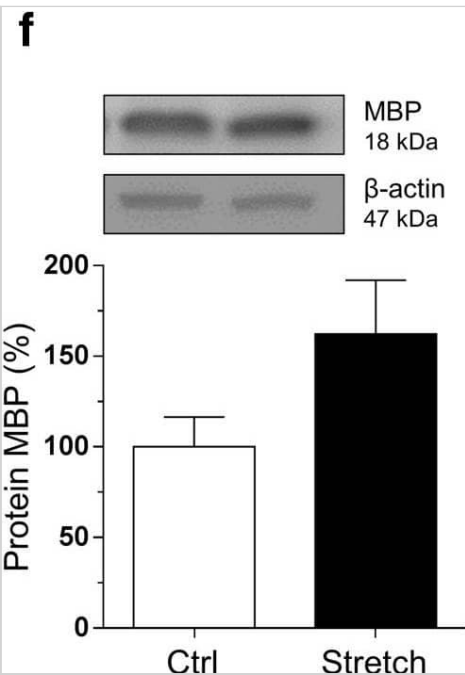
Western Blot: Myelin PLP Antibody [NB100-74503] - Alteration in myelin gene expression after in vitro mechanical tensile strain of 20% & 30%. Total RNA was extracted & RT-qPCR was performed in control (Ctrl) & stretched (Stretch) cells for myelin genes Mag (a, d), Cnp (b, e), & Plp (c, f, g, i) after strain of 20% (a, b, c, g) & 30% (d, e, f, i). Results represent the mean  $\pm$  SEM of three independent experiments performed in triplicate. \* $p < 0.05$ ; \*\* $p < 0.01$ . (h, j) Proteins were extracted from control (Ctrl) & stretched (Stretch) 158N cells & western blot was performed for myelin protein PLP (26 kDa) following 20% (h) & 30% (j) of strain.  $\beta$ -Actin was used as a loading control. Results represent the mean  $\pm$  SEM of three independent experiments Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/30298339>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



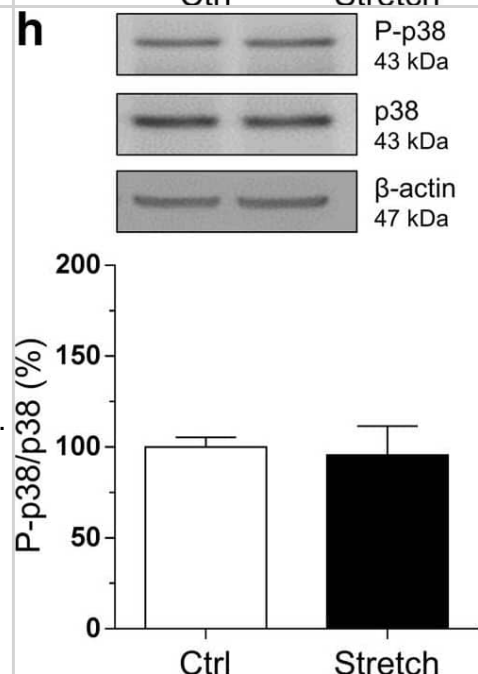
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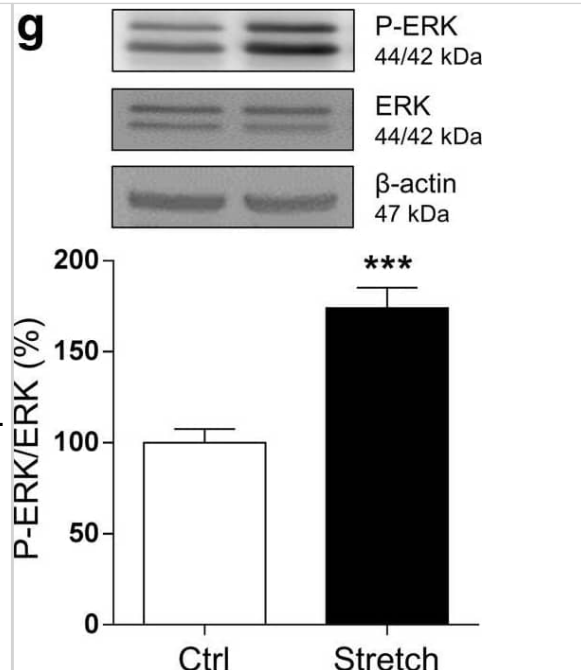
Western Blot: Myelin PLP Antibody [NB100-74503] - Mechanical tensile strain of 30% induces an elongation of paranodal junction & alteration in MAPK signaling in organotypic cerebellar slice culture. a Double immunostaining of organotypic cerebellar slices for CASPR in red & MAG in green. The response was evaluated at time 0 h post-stretch. Altered paranodal junctions are highlighted within white circles in high-magnification images. Scale bar, 50  $\mu$ m; inset scale bar, 5  $\mu$ m. b Sketch of CASPR & MAG labeling in the paranodal junction. Quantitative analysis is characterized by three length measurements: c nodal length called (A); d paranodal length called (B); & e (B-A) corresponding to the total length of the CASPR labeling. f–h Proteins were extracted following strain of 30% from control (Ctrl) & stretched (Stretch) slices & western blot was performed for the myelin protein MBP (f), ERK1/2 (g), & p38 (h). The ratio P-ERK on total ERK & the ratio P-p38 on total p38 are presented.  $\beta$ -Actin was used as a loading control. Results represent the mean  $\pm$  SEM (n = 3). \*\*\*p < 0.001. CASPR contactin-associated protein, MAG myelin-associated glycoprotein Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/30298339>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



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## Publications

Pijuan I, Balducci E, Soto-Sanchez C et al. DYRK1A haploinsufficiency affects the development of astroglia and oligodendroglia, and axonal conductivity in the brain Research Square 2022-08-08 (WB, Mouse)

### Details:

Dilution used for WB 1:1000

Sghaier R, Zarrouk A et al. Biotin attenuation of oxidative stress, mitochondrial dysfunction, lipid metabolism alteration and 7 beta-hydroxycholesterol-induced cell death in 158N murine oligodendrocytes. Free Radic Res 2019-01-05 [PMID: 31039616] (WB, Mouse)

Sghaier R, Nury T, Leoni V et al. Dimethyl fumarate and monomethyl fumarate attenuate oxidative stress and mitochondrial alterations leading to oxiaoptophagy in 158N murine oligodendrocytes treated with 7 beta-hydroxycholesterol J. Steroid Biochem. Mol. Biol. 2019-07-22 [PMID: 31344443] (WB, Mouse)

Chierto E, Simon A, Castoldi F et al. Mechanical Stretch of High Magnitude Provokes Axonal Injury, Elongation of Paranodal Junctions, and Signaling Alterations in Oligodendrocytes. Mol. Neurobiol. 2018-10-08 [PMID: 30298339] (WB, Mouse)

Horiuchi M, Maezawa I, Itoh A et al. Amyloid Beta 1-42 oligomer inhibits myelin sheet formation in vitro. Neurobiology of Aging 2012-03-12 [PMID: 20594620] (WB, ICC/IF, Rat)

Kiebish MA, Young DM, Lehman JJ, Han X. Chronic caloric restriction attenuates a loss of sulfatide content in PGC-1alpha<sup>-/-</sup> mouse cortex: a potential lipidomic role of PGC-1alpha in neurodegeneration. J Lipid Res 2012-02-01 [PMID: 22114039]



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General: novus@novusbio.com

### **Products Related to NB100-74503**

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HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control
H00005354-Q01-10ug	Recombinant Human Myelin PLP GST (N-Term) Protein

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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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