

# PLP (G-17): sc-23570

## BACKGROUND

PLP (myelin proteolipid protein or lipophilin) is a major constituent of myelin. The two isoforms of the myelin proteolipid protein, PLP and DM20, are very hydrophobic integral membrane proteins that account for about half of the protein content of adult CNS myelin. A mutation in the gene which encodes PLP is linked to Pelizaeus-Merzbacher disease (PMD), a chronic infantile type of diffuse cerebral sclerosis. The gene which encodes PLP maps to human chromosome Xq22.2. The glycoprotein zero (also designated P-zero or myelin peripheral protein) is the primary structural protein of peripheral myelin, and accounts for more than 50% of the protein present in the peripheral nerve sheath. Zero is an integral membrane glycoprotein. Expression of zero is restricted to Schwann cells. The gene which encodes zero maps to human chromosome 1q22. PMP22 (peripheral myelin protein 22) is a growth-regulated membrane protein which is expressed by Schwann cells and is localized primarily in compact peripheral nervous system myelin. The gene which encodes PMP22 maps to human chromosome 17p11.2.

## CHROMOSOMAL LOCATION

Genetic locus: PLP1 (human) mapping to Xq22.2; Plp1 (mouse) mapping to X F1.

## SOURCE

PLP (G-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PLP of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-23570 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PLP (G-17) is recommended for detection of PLP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PLP (G-17) is also recommended for detection of PLP in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PLP siRNA (h): sc-42034, PLP siRNA (m): sc-42035, PLP shRNA Plasmid (h): sc-42034-SH, PLP shRNA Plasmid (m): sc-42035-SH, PLP shRNA (h) Lentiviral Particles: sc-42034-V and PLP shRNA (m) Lentiviral Particles: sc-42035-V.

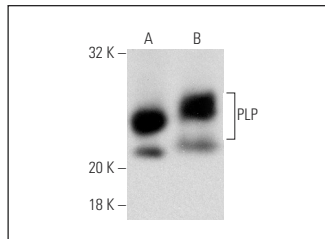
Molecular Weight of PLP: 30 kDa.

Positive Controls: JEG-3 whole cell lysate: sc-364255, mouse cerebellum extract: sc-2403 or mouse brain extract: sc-2253.

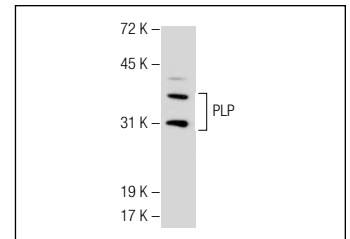
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



PLP (G-17): sc-23570. Western blot analysis of PLP expression in mouse brain (A) and mouse cerebellum (B) tissue extracts.



PLP (G-17): sc-23570. Western blot analysis of PLP expression in JEG-3 whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Srivastava, V., et al. 2011. Suppressors of cytokine signaling inhibit effector T cell responses during *Mycobacterium tuberculosis* infection. *Immunol. Cell Biol.* 89: 786-791.
2. Vakizadeh, G., et al. 2014. Protective effect of a cAMP analogue on behavioral deficits and neuropathological changes in cuprizone model of demyelination. *Mol. Neurobiol.* E-Published.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **PLP (plpc 1): sc-58571**, our highly recommended monoclonal alternative to PLP (G-17).