

# PLP (H-55): sc-98781

## 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 glycoprotein P-zero (zero or myelin peripheral protein) is the major structural protein of peripheral myelin, accounting for more than 50% of the protein present in the sheath of peripheral nerves. Zero is an integral membrane glycoprotein whose expression is restricted to Schwann cells. PMP22 (peripheral myelin protein 22) is a growth-regulated membrane protein which is expressed by Schwann cells and is localized mainly 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 (H-55) is a rabbit polyclonal antibody raised against amino acids 96-150 mapping within an internal region 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.

## STORAGE

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

## APPLICATIONS

PLP (H-55) 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 (H-55) 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.

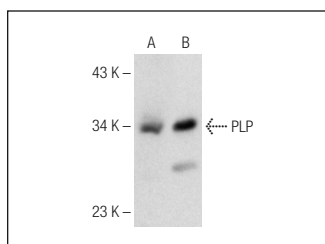
Molecular Weight of PLP: 30 kDa.

Positive Controls: JEG-3 whole cell lysate: sc-364255, HeLa whole cell lysate: sc-2200 or mouse brain extract: sc-2253.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



PLP (H-55): sc-98781. Western blot analysis of PLP expression in HeLa whole cell lysate (A) and mouse brain tissue extract (B).

## SELECT PRODUCT CITATIONS

1. Nguyen, M.V., et al. 2013. Oligodendrocyte lineage cells contribute unique features to Rett syndrome neuropathology. *J. Neurosci.* 33: 18764-18774.
2. Vakilzadeh, G., et al. 2015. The effect of melatonin on behavioral, molecular, and histopathological changes in cuprizone model of demyelination. *Mol. Neurobiol.* E-published.

## 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.



Try **PLP (plpc 1): sc-58571**, our highly recommended monoclonal alternative to PLP (H-55).