SANTA CRUZ BIOTECHNOLOGY, INC.

PMP22 (C-20): sc-18535

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

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 Xq13-q22. The glycoprotein zero (also designated P-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. 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 mainly in compact peripheral nervous system myelin. The gene which encodes PMP22 maps to human chromosome 17p12.

REFERENCES

1. Ford, F.R. 1960. Diseases of the nervous system in infancy, childhood and adolescence. Springfield, Ill: Charles C Thomas (4th ed.), 831-833.
2. Willard, H.F. and Riordan, J.R. 1985. Assignment of the gene for myelin proteolipid protein to the X chromosome: implications for X-linked myelin disorders. Science 230: 940-942.
3. Mattei, M.G., et al. 1986. The gene encoding for the major brain proteolipid (PLP) maps on the q-22 band of the human X chromosome. Hum. Genet. 72: 352-353.
4. Patel, P.I., et al. 1992. The gene for the peripheral myelin protein PMP-22 is a candidate for Charcot-Marie-Tooth disease type 1A. Nat. Genet. 1: 159-165.
5. Suter, U., et al. 1992. A leucine-to-proline mutation in the putative first transmembrane domain of the 22 kDa peripheral myelin protein in the trembler-J mouse. Proc. Natl. Acad. Sci. USA 89: 4382-4386.
6. Hayasaka, K., et al. 1993. Structure and chromosomal localization of the gene encoding the human myelin protein zero (MPZ). Genomics 17: 755-758.

CHROMOSOMAL LOCATION

Genetic locus: PMP22 (human) mapping to 17p12; Pmp22 (mouse) mapping to 11 B3.

SOURCE

PMP22 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PMP22 of human origin.

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.

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-18535 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PMP22 (C-20) is recommended for detection of PMP22 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

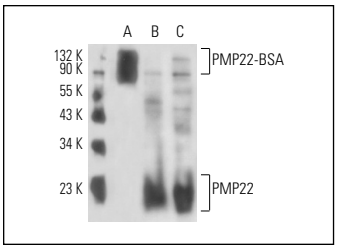
PMP22 (C-20) is also recommended for detection of PMP22 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for PMP22 siRNA (h): sc-42036 and PMP22 siRNA (m): sc-42037; and as shRNA Plasmid control antibody for PMP22 shRNA Plasmid (h): sc-42036-SH and PMP22 shRNA Plasmid (m): sc-42037-SH.

Molecular Weight of PMP22: 22 kDa.

Positive Controls: mouse brain extract: sc-2253, rat sciatic nerve extract: sc-395023 or human brain hippocampus extract: sc-364375.

DATA



PMP22 (C-20): sc-18535. Western blot analysis of human recombinant PMP22-BSA (**A**) and PMP22 expression in rat sciatic nerve (**B**) and mouse brain (**C**) tissue extracts.

SELECT PRODUCT CITATIONS

1. Vakilzadeh, G., et al. 2014. Protective effect of a cAMP analogue on behavioral deficits and neuropathological changes in cuprizone model of demyelination. Mol. Neurobiol. 52: 130-141.
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.

MONOS Satisfaction Guaranteed

Try **PMP22 (G-6): sc-515199** or **PMP22 (PMP22H1): sc-65739**, our highly recommended monoclonal alternatives to PMP22 (C-20).