

## Product Information

### Anti-PMP22

produced in rabbit, affinity isolated antibody

Catalog Number **P0078**

### Product Description

Anti-PMP22 is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acid residues 118-133 of human PMP22 (GeneID: 5376), with an added cysteine, conjugated to KLH. The corresponding sequence differs by 3 amino acids in rat and mouse. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-PMP22 recognizes human PMP22 by immunohistochemistry (not yet tested in other species). Detection of the PMP22 protein by immunohistochemistry is specifically inhibited by the immunizing peptide.

Myelin is a highly specialized extension of the plasma membrane of Schwann cells in the peripheral nervous system (PNS), and of oligodendrocytes in the central nervous system (CNS). The regulation of myelin protein expression is under exquisite control due to the highly specialized function of myelin in the nervous system. Furthermore, it shows a similar pattern of regulation both during development and during nerve regeneration.<sup>1,2</sup> The glycoprotein **Peripheral Myelin Protein 22 (PMP22)**, also known as growth arrest specific 3 (*gas3*), has proposed roles in peripheral nerve myelin formation, cell-cell interactions, and cell proliferation.<sup>3</sup> PMP22 expression is highest in myelin-forming Schwann cells; however, its mRNA can be detected in a variety of developing and mature non-neural tissues including intestine and lung epithelia, as well as the choroids plexus.<sup>2</sup> Abnormalities in the PMP22 gene cause neuropathies in both mice and humans. PMP22 gene duplication or point mutation result in the Charcot-Marie-Tooth disease (CMT) type 1A.<sup>4</sup> Furthermore, due to its involvement in growth arrest, it has also been implicated in neoplastic transformation of normal tissue to pre-malignant lesions and to cancer of the pancreas and osteoblasts.<sup>5,6</sup>

### Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~1.0 mg/mL

### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

### Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze at -20 °C in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

### Product Profile

**Immunohistochemistry:** a working concentration of 2.5-5 µg/mL is recommended using biotin/ExtrAvidin®-Peroxidase staining of formalin-fixed, paraffin-embedded human spinal cord sections.

**Note:** In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

### References

1. Simons, M., and Trotter, J., *Curr. Opin. Neurobiol.*, **17**, 533-540 (2007).
2. Quarles, R. H., *Cell. Mol. Life Sci.*, **59**, 1851-1871 (2002).
3. Snipes, G. J., et al., *Ann. NY Acad. Sci.*, **883**, 143-151 (1999).
4. Kočański, A., *J. Appl. Genet.*, **47**, 225-260 (2006).
5. Li, J., et al., *J. Histochem. Cytochem.*, **53**, 885-893 (2005).
6. Van Dartel, M., and Hulsebos, T.J.M., *Cancer Gen. Cytogen.*, **152**, 113-118 (2004).

ExtrAvidin is a registered trademark of Sigma-Aldrich Biotechnology LP and Sigma-Aldrich Co.

GG,ST,DXP,PHC 07/08-1