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# Oligodendrocyte Marker Antibody Sampler Kit

#30728



Cell Signaling  
TECHNOLOGY®

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New 05/20

**For Research Use Only. Not For Use In Diagnostic Procedures.**

Products Included	Product #	Quantity	Mol. Wt.	Isotype/Source
Myelin Basic Protein (D8X4Q) XP® Rabbit mAb	78896	20 µl	12-18 kDa	Rabbit IgG
CNPase (D83E10) XP® Rabbit mAb	5664	20 µl	47 kDa	Rabbit IgG
PLP1 (E9V1N) Rabbit mAb	28702	20 µl	20-30 kDa	Rabbit IgG
MAG (D4G3) XP® Rabbit mAb	9043	20 µl	100 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

See [www.cellsignal.com](http://www.cellsignal.com) for individual component applications, species cross-reactivity, dilutions and additional application protocols.

**Description:** The Oligodendrocyte Marker Antibody Sampler Kit provides an economical means of detecting proteins identified as oligodendrocyte markers by immunofluorescence and western blot.

**Background:** Oligodendrocytes are the myelinating glial cells of the central nervous system (CNS) (1). Myelin basic protein (MBP) is an abundant CNS myelin membrane protein that plays an important role in nerve myelination. MBP helps to adhere the cytoplasmic leaflets of adjacent oligodendrocyte membranes to one another (2). CNPase (2', 3'-cyclic nucleotide 3'-phosphodiesterase) is an enzyme highly expressed in oligodendrocytes and accounts for roughly 4% of the total myelin protein in the CNS (3). CNPase binds to tubulin heterodimers and plays a role in tubulin polymerization, and oligodendrocyte process outgrowth (4). Myelin proteolipid protein (PLP1) corresponds to the majority of myelin proteins in the CNS, providing support to axons and modulating axonal growth (5). Myelin-associated glycoprotein (MAG) is localized in oligodendroglial membranes of myelin sheaths where it plays a role in interaction between axons and glia, and has been shown to promote axonal protective effects (6,7).

**Specificity/Sensitivity:** Each antibody in the Oligodendrocyte Marker Antibody Sampler Kit detects endogenous levels of its target protein.

**Source/Purification:** Monoclonal antibodies are produced by immunizing animals with synthetic peptides corresponding to residues surrounding Ala185 of human myelin basic protein, Val81 of human CNPase protein, Arg605 of human MAG protein, and the carboxy terminus of human PLP1 protein.

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibodies.

**For product specific protocols and a complete listing of recommended companion products please see the product web page at [www.cellsignal.com](http://www.cellsignal.com).**

#### Background References:

- (1) Bradl, M. and Lassmann, H. (2010) *Acta Neuropathol* 119, 37-53.
- (2) Harauz, G. and Boggs, J.M. (2013) *J Neurochem* 125, 334-61.
- (3) Kozlov, G. et al. (2003) *J Biol Chem* 278, 46021-8.
- (4) Lee, J. et al. (2005) *J Cell Biol* 170, 661-73.
- (5) Thomson, C.E. et al. (2005) *Dev Neurosci* 27, 27-36.
- (6) Quarles, R.H. (2007) *J Neurochem* 100, 1431-48.
- (7) Nguyen, T. et al. (2009) *J Neurosci* 29, 630-7.

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**Applications:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.