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#42135

# Demyelinating Disease Targets Antibody Sampler Kit



**Support:** +1-978-867-2388 (U.S.)  
www.cellsignal.com/support

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New 04/20

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

Products Included	Product #	Quantity	Mol. Wt.	Isotype/Source
Myelin Basic Protein (E9P7U) Mouse mAb	83683	20 µl	12-18 kDa	Mouse IgG2b, kappa
PLP1 (E9V1N) Rabbit mAb	28702	20 µl	20-30 kDa	Rabbit IgG
MOG (E5K6T) XP® Rabbit mAb	96457	20 µl	28 kDa	Rabbit IgG
MAG (D4G3) XP® Rabbit mAb	9043	20 µl	100 kDa	Rabbit IgG
Caspr (D8I3V) Rabbit mAb	97736	20 µl	190 kDa	Rabbit IgG
Caspr2 (D6S10) Rabbit mAb	61962	20 µl	150 kDa	Rabbit IgG
Neurofascin 155 (D7B60) Rabbit mAb	15035	20 µl	140-155 kDa	Rabbit IgG
Neurofascin 186 (D6G60) Rabbit mAb	15034	20 µl	200 kDa	Rabbit IgG
β3-Tubulin (D71G9) XP® Rabbit mAb	5568	20 µl	55 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 Demyelinating Disease Targets Antibody Sampler Kit provides an economical means of detecting the protein components of myelin sheath. The kit includes enough antibodies to perform two western blot experiments with each primary antibody.

**Background:** Myelin is the insulating material surrounding neuronal axons. The function of myelin is to promote action potential propagation down the axon to the axon terminal. Myelin is formed in the central nervous system (CNS) by specialized glial cells called oligodendrocytes and by Schwann cells in the peripheral nervous system (PNS). Oligodendrocytes and Schwann cells make concentric rings, called the myelin sheath, around the axon at regular intervals. These intervals, called nodes of ranvier, are enriched in structural proteins and ion channels, which help promote action potential propagation. Several proteins are enriched in the myelin sheath and likely help mediate the tight multi-layered membranes that make up the sheath. These proteins include myelin basic protein (MBP, [1]), myelin-associated glycoprotein (MAG, [2]), myelin proteolipid protein (PLP1, [3]) and myelin-oligodendrocyte glycoprotein (MOG, [4]). Contactin-associated protein (Caspr) 1 & 2 (5,6) and neurofascin 155 & 186 (7,8) are nodes of ranvier-associated proteins that may play roles in generating the regular intervals of myelin along the axon. Expression of several of these proteins are altered in demyelinating diseases such as multiple sclerosis (MS). Additionally, mislocalization and/or altered expression of these proteins, compared to the axonal protein β3-tubulin, may represent altered myelin function.

**Specificity/Sensitivity:** Each antibody in the Demyelinating Disease Targets Antibody Sampler Kit detects endogenous levels of its target protein. β3-Tubulin (D71G9) XP® Rabbit mAb detects endogenous levels of total β3-tubulin protein. β3-Tubulin (D71G9) XP® Rabbit mAb does not cross-react with tubulin isoforms expressed in non-neuronal cells. β3-Tubulin (D71G9) XP® Rabbit mAb is similar to TUJ1.

**Source/Purification:** Monoclonal antibodies are produced by immunizing rabbits with synthetic peptides corresponding to Arg188 of human MBP protein, Arg605 of human MAG protein, Pro1375 of human Caspr protein, Gln1040 of human Caspr2 protein, Arg881 of human neurofascin 155 protein, Thr1108 of human neurofascin 186 protein, residues near the carboxy terminus of human PLP1 protein, and the carboxy terminus of human β3-tubulin protein. MOG (E5K6T) XP® Rabbit mAb is produced by immunizing animals with recombinant protein specific to the extracellular membrane proximal amino terminus of human MOG 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) Harauz, G. and Boggs, J.M. (2013) *J Neurochem* 125, 334-61.
- (2) Li, M. et al. (1996) *J Neurosci Res* 46, 404-14.
- (3) Thomson, C.E. et al. *Dev Neurosci* 27, 27-36.
- (4) Johns, T.G. and Bernard, C.C. (1999) *J Neurochem* 72, 1-9.
- (5) Rios, J.C. et al. (2000) *J Neurosci* 20, 8354-64.
- (6) Einheber, S. et al. (1997) *J Cell Biol* 139, 1495-506.
- (7) Charles, P. et al. (2002) *Curr Biol* 12, 217-20.
- (8) Thaxton, C. et al. (2011) *Neuron* 69, 244-57.

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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.