

Store at
-20°C

#38289

Oligodendrocyte Marker Antibody Sampler Kit



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

Product Includes	Product #	Quantity	Mol. Wt.	Isotype/Source
Olig2 (E6G6Q) XP® Rabbit mAb	65915	20 µL	35 kDa	Rabbit IgG
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
MOG (E5K6T) XP® Rabbit mAb	96457	20 µL	46, 35, 28, 23 kDa	Rabbit IgG
NG2/CSPG4 (E3B3G) XP® Rabbit mAb	43916	20 µL	250, 450 kDa	Rabbit IgG
Sox10 (E6B6I) XP® Rabbit mAb	69661	20 µL	62 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µL		Goat

See 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. This kit includes enough primary antibodies to perform at least twenty IF tests or two western blot experiments per primary antibody.

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). Chondroitin sulfate proteoglycan 4 (CSP4, NG2) is a type I membrane glycoprotein expressed by oligodendroglial precursor cells (OPCs) that plays a role in cell attachment and migration (8). SRY-box 10 (Sox10) is a high-mobility group transcription factor expressed throughout oligodendrocyte development required for myelin gene expression (9,10). Myelin-oligodendrocyte glycoprotein (MOG) is a type I membrane bound glycoprotein of the immunoglobulin superfamily that is enriched in the outer lamella of the myelin sheath (11). Olig2 is a basic helix-loop-helix (bHLH) transcription factor necessary for oligodendrocyte and motor neuron differentiation and development in the CNS (12,13). Olig2 has been shown to be a useful marker for primary and mature oligodendrocytes and is universally expressed in diffuse gliomas (14,15).

Specificity/Sensitivity: Each antibody in the Oligodendrocyte Marker Antibody Sampler Kit detects endogenous levels of its target protein. Sox10 (E6B6I) XP® Rabbit mAb also recognizes presumptive sumoylated forms of Sox10 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, Asp1410 of human NG2/CSPG4 protein, Gly446 of human Sox10 protein, recombinant protein specific to the carboxy terminus of human Olig2 protein and human PLP1 protein, and 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.*

Please visit www.cellsignal.com for validation data and a complete listing of recommended companion products.

Background References:

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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.