



Online Resource 3. Examples of distinct white matter phenotypes of MS patients.

Representative examples of MS white matter stainings according to Kuhlmann et al., *Acta Neuropathol* (2017) [29]. We used myelin oligodendrocyte glycoprotein (MOG), HLA class II (HLA-II) and CD68, expressed by macrophages and microglia, as markers to discriminate normal appearing white matter (NAWM: HLA-II^{+/−}Myelin⁺CD68^{+/−}), diffuse white matter abnormalities (DWMA: HLA-II⁺⁺Myelin⁺CD68⁺), active lesions (AL: HLA-II⁺⁺Myelin^{+/−}CD68⁺), mixed active/inactive lesions (mAIL; hypercellular rim: HLA-II⁺⁺Myelin^{+/−}CD68⁺⁺ and hypocellular center: HLA-II^{+/−}Myelin[−]CD68^{+/−}) and inactive lesions (IL: hypocellular: HLA-II^{+/−}Myelin[−]CD68^{+/−}) in consecutive 8 μm sections of snap-frozen MS brain tissues. Scale bar is indicated in top left image.