Cell type abundances per sample **S**02 **S06** S10 **S04 S**08 **S12 S05** 809 **S**03 **S07** S11 **S01** X12mWT X12mAD X6mAD X6mWT 2000 **Astrocytes** 1000 100 75 50 25 0 **Endothelial.cells** 600 400 200 Ependymal.cells 6000 4000 2000 # cells per sample-celltype combination **Excitatory.Neurons** 100 **Fibroblasts** 50 6000 4000 2000 Inhibitory.Neurons keep **TRUE** Meningeal.cells Microglia Oligodendrocytes **OPCs** 120 90 60 30 0 **Pericytes** 60 40 20 0 **RGCs**

Cell type abundances per group Excitatory.Neurons Astrocytes Endothelial.cells Ependymal.cells 100 6000 600 75 2000 4000 400 50 1000 2000 200 25 cells per sample-celltype combination X12xXA2mXGTmX60mWT X12mX@mX@mXDmWT X12xXA2mXGTmX60mWT X12mX@mX@mX@mWT **Fibroblasts** Inhibitory.Neurons Meningeal.cells Microglia 400 6000 400 300 100 300 4000 keep 200 200 **TRUE** 50 2000 -100 100 X12mX6mX6mWT X12mX6mX6mWT X12xXA2mXV6TmX46mWT X12mX6mX6mWT Oligodendrocytes **OPCs RGCs** Pericytes 120 800 5000 60 4000 600 90 3000 400 60 40 2000 200 1000 30 20 X12mX6mX6mWT X12mX@mX@mAcmWT X12mX6mX6mWT X12mX6mX6mWT Group