



Fig. S1. *Gsx2*-derived cortical cells express multiple markers of OPCs. Nearly all Sox10-positive cells coexpress Olig2 within the E18.5 cortex in both control (A) and *Gsx2* mutants (E). More of these double-labeled OPCs are seen coming from EGFP-positive mutant progenitors (F, arrows) compared with control (B, arrows), which is in accordance with our observations of cells expressing single oligodendroglial markers. The majority of Sox10- and *Pdgfra*-expressing cells were co-labeled in both controls (C) and mutants (G). Again, many more of these cells were *Gsx2* derived (i.e. EGFP-expressing) in mutant embryos (H, arrows) compared with controls (D, arrows).