

Other Supplementary Materials

Movie S1. Overview of the morphology of an entire *Pleurodeles waltl* brain. Optical coronal slices (1741 sections) of a cleared brain, stained with the nuclear marker TO-PRO-3, and imaged using light sheet microscopy along its anterior-posterior axis.

Movie S2. Expression of marker genes in entire brains in virtual sections. Optical coronal slices (~1800 sections per brain) of intact, cleared brains, stained using HCR or immunostaining, and imaged with light-sheet microscopy along their anterior-posterior axis. Slices of entire brains expressing *Etv1* (highly expressed in MP and DP), SATB1 (highly expressed in LP), *Sox6* (highly expressed in POE and VPa/p), *Slc17a6* (highly expressed in mOB, Vpp, and Amy), *Nr2f2* (highly expressed in Vpp/MeA/LA), *Penk* (highly expressed in mOB, Str, and MP, among others), and *Rorb* (highly expressed in LP, VPa, and VP) are shown sequentially.

Movie S3. Expression of marker genes in entire brains in 3D. 3D maximum intensity projections in intact, cleared brains, stained using HCR or immunostaining, and imaged with light-sheet microscopy, each rotated along their medial axis. 3D brains expressing *Etv1* (highly expressed in MP and DP), SATB1 (highly expressed in LP), *Sox6* (highly expressed in POE and VPa/p), *Slc17a6* (highly expressed in mOB, Vpp, and Amy), *Nr2f2* (highly expressed in Vpp/MeA/LA) and *Penk* (highly expressed in mOB, Str, and MP, among others) are shown sequentially.