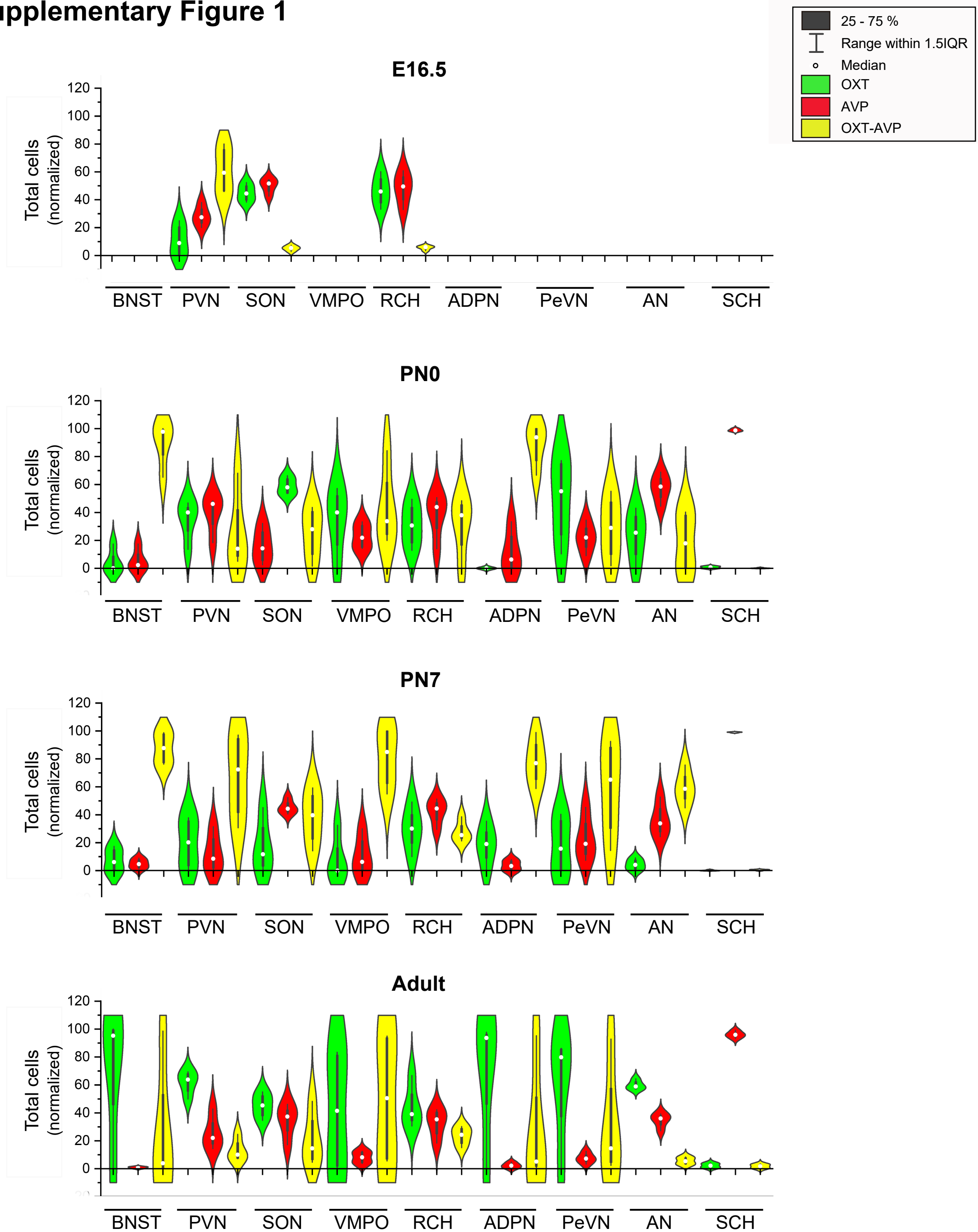
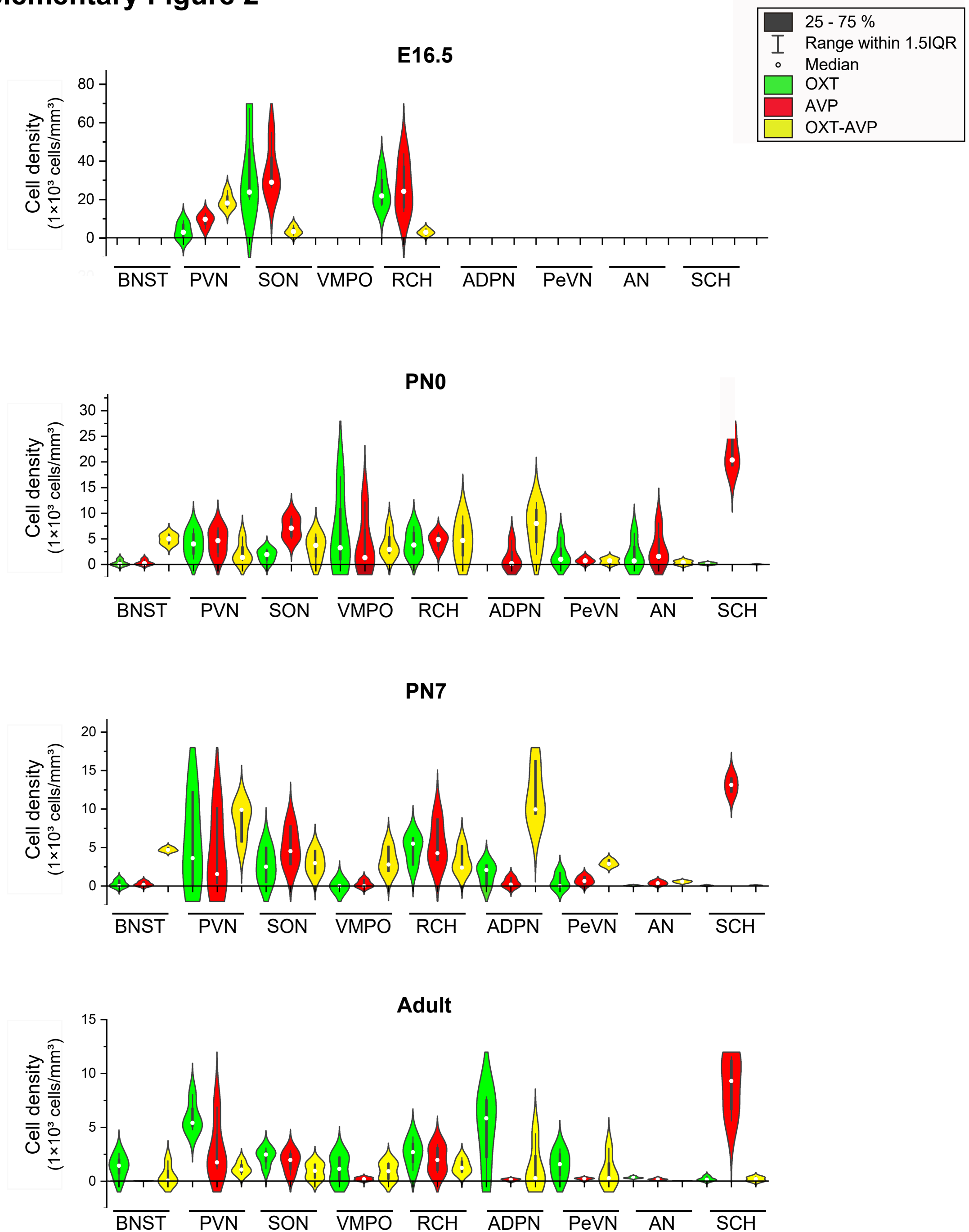


Supplementary Figure 1



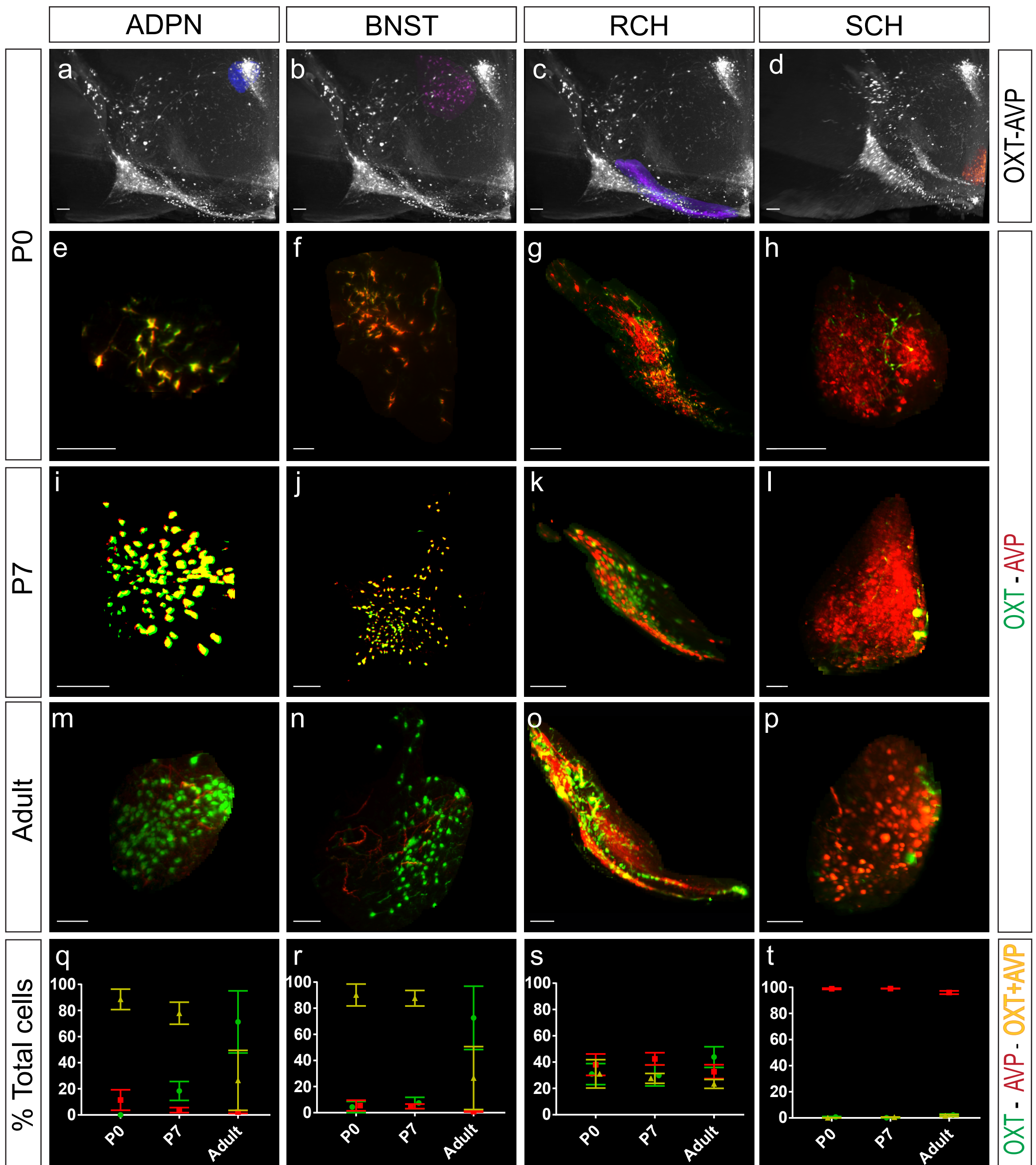
Supplementary Fig. 1 OXT and AVP dynamics during development. Violin plots represent the percentage of OXT (green), AVP (red) and OXT+AVP neurons (yellow) at E16.5, PN0, PN7 and adult. Each violin plot shows the distribution of the values as well as the median as a white dot (n=4 brains) and the interquartile range (IQR) as a thin black bar. Note that in the cases where the violin plot does not appear, it indicates that the nucleus is not yet formed.

Supplementary Figure 2



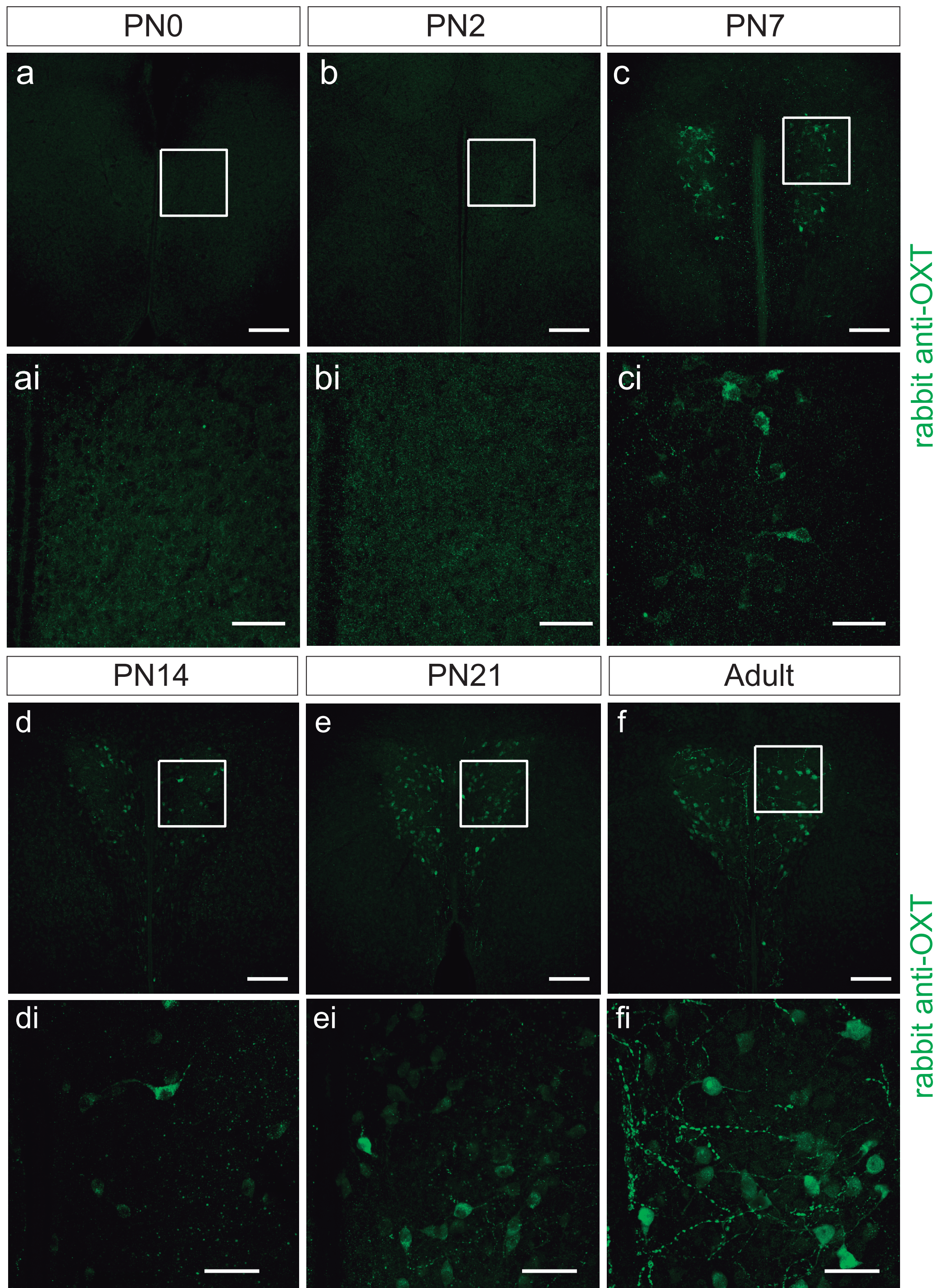
Supplementary Fig. 2 OXT and AVP expression density during development. Violin plots represent the cell density of OXT (green), AVP (red) and OXT+AVP neurons (yellow) at E16.5, PN0, PN7 and adult. Each violin plot shows the distribution of the values as well as the median as a white dot ($n=4$ brains) and the interquartile range (IQR) as a thin black bar. Note that in the cases where the violin plot does not appear, it indicates that the nucleus is not yet formed. Cell density is represented as 1×10^3 cells/mm³.

Supplementary figure 3



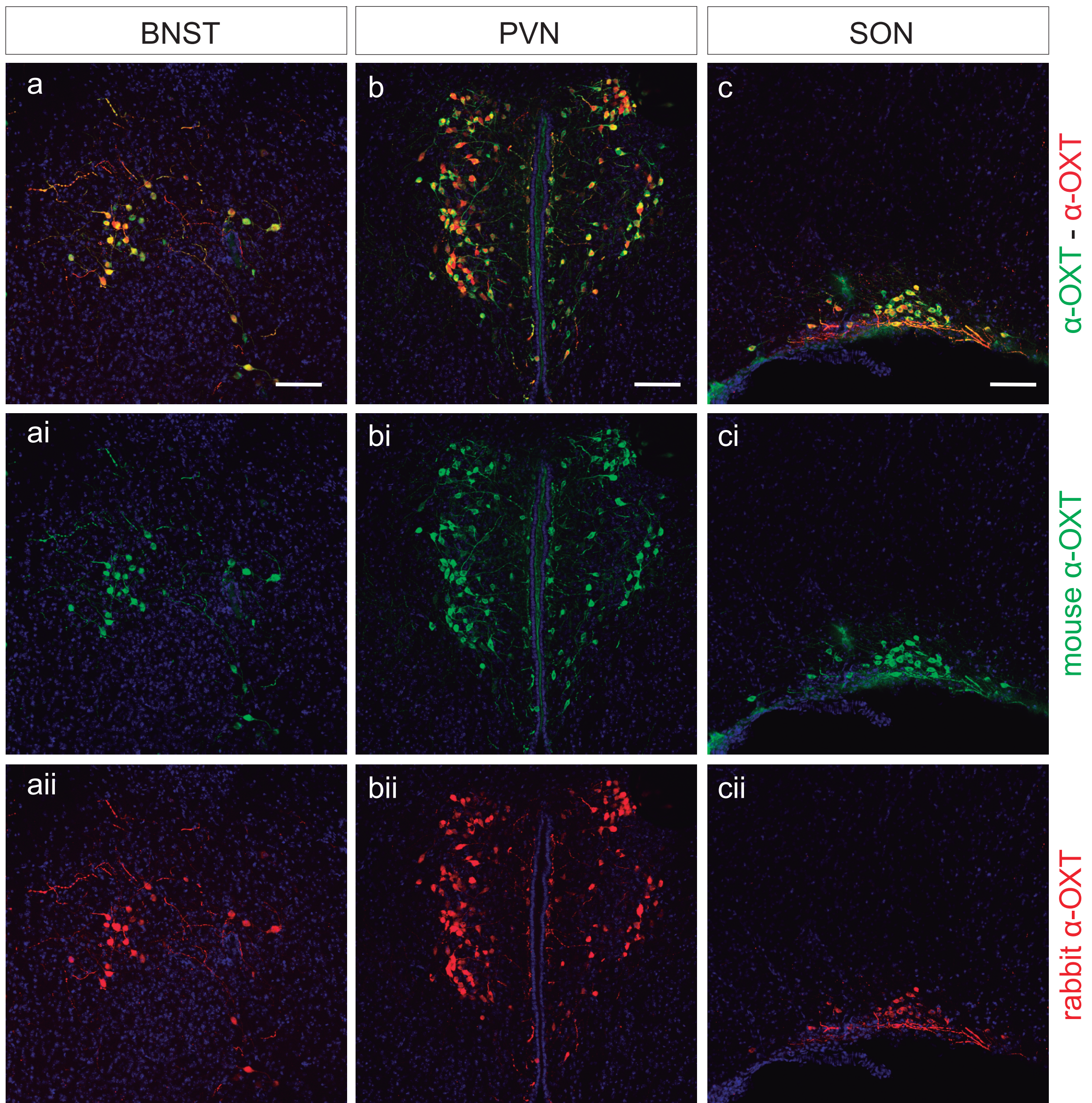
Supplementary Fig. 3 Distinct nuclei exhibit distinct OXT and AVP expression dynamics during development. Whole-mount immunolabeling against OXT and AVP at PN0 mouse hypothalamus pseudocolored in each nucleus (a-d). Nucleus segmentation shows OXT (green) and AVP (red) at different stages: PN0 (e-h), PN7 (i-l), and young adult (m-p). Percentage of each neuronal population, OXT, AVP and OXT+AVP neurons, in each nucleus during development (q-t; n=4 brains data are represented as mean \pm S.E.M). Abbreviations: AN, accessory nucleus; VMPO, ventromedial preoptic nucleus; SCH, suprachiasmatic nucleus; RCH, retrochiasmatic nucleus. Scale bar: 100 μ m.

Supplementary figure 4



Supplementary Fig. 4 Detection of OXT expression with rabbit anti-OXT (Millipore AB911). Brain coronal sections of wild type mouse showing the PVN (**a-f**) and high magnification (**ai-fi**) at a range of developmental stages: PN0, PN2, PN7, PN14, PN21 and adult brain. Note that the initial detection of OXT with this antibody occurs at PN7. Scale bar: **a-f**: 150 μ m; **ai-fi**: 50 μ m.

Supplementary figure 5



Supplementary Fig. 5 Detection of OXT expression in the adult mouse brain. Representative images of immunohistofluorescence experiments using the mouse anti-OXT PS38 and rabbit anti-OXT (Millipore AB911). Images show brain coronal sections of adult wild type mouse for a variety of regions: BNST, PVN and SON. Scale bar: 100 μ m.