

Supporting Information

Rochefort et al. 10.1073/pnas.0907660106

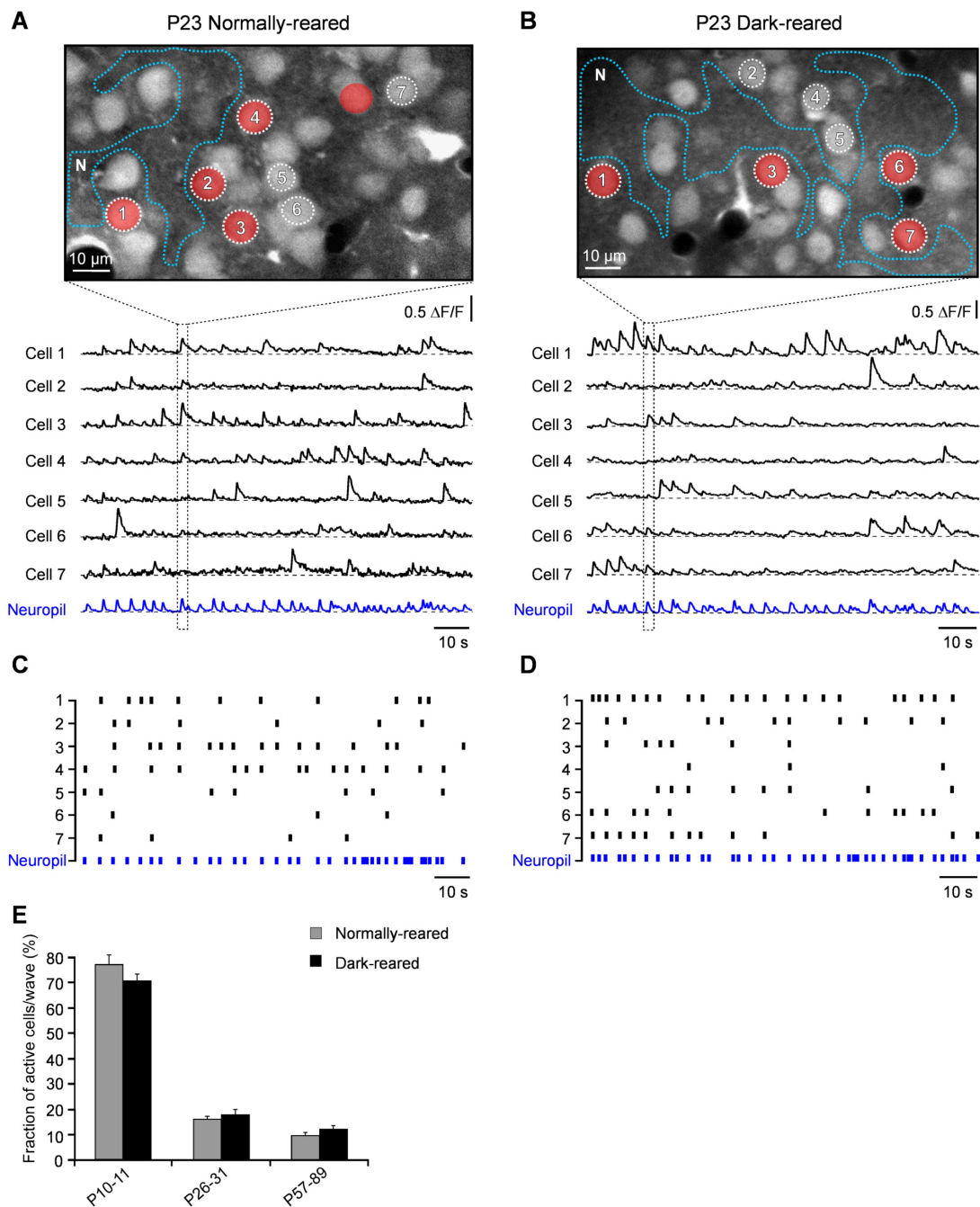


Fig. S1. Sparsification develops in the absence of visual experience. (*A* and *B*) Wave-associated Ca^{2+} transients in individual layer 2/3 neurons in a control (*A*) and in a dark-reared (*B*) 23-day-old mouse. The two images in the top row indicate the regions of interest. Bottom row: wave-associated Ca^{2+} transients in individual neurons. Active cells during a representative Ca^{2+} wave (indicated by dotted lines) are marked in red. (*C* and *D*) Dot plot representation of cellular responses during consecutive waves in a control (*C*) and in a dark-reared (*D*) 23-day-old mouse (same experiments as in *A* and *B*). (*E*) Mean values of the fraction of active cells per Ca^{2+} wave in control and dark reared mice at P11 ($n = 6$ and 5 , respectively), P20–29 ($n = 10$ and 7 , respectively) and P48–79 ($n = 5$ and 10 , respectively). No significant difference in the activity pattern was found between control and dark-reared mice (Kolmogorov-Smirnov t test). Error bars represent standard error of the mean.

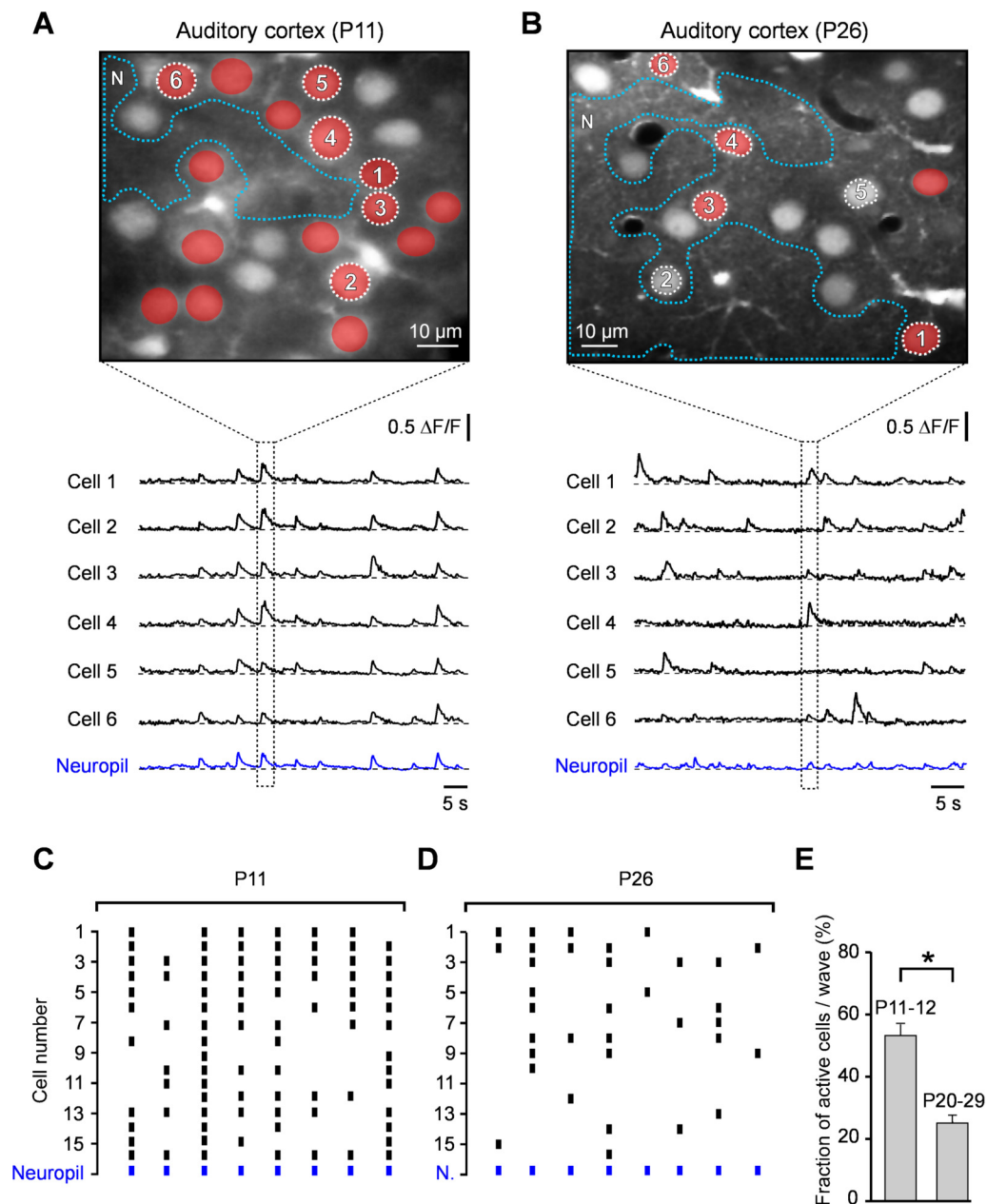


Fig. S2. Sparsification in the mouse auditory cortex. (A and B) Recordings from layer 2/3 in the auditory cortex of a P12 (A) and a P26-old mouse (B). The two images in the top row indicate the regions of interest. Bottom row: wave-associated Ca^{2+} transients in individual neurons (Top). Active cells during a representative Ca^{2+} wave (indicated by dotted lines) are marked in red. (C and D) Dot plot representation of cellular responses during 8 consecutive waves at P12 and P26, respectively (same experiments as in A and B). (E) Bar graph summarizing the results from all mice tested at P11–12 ($n = 4$) and at P20–29 ($n = 5$). Error bars represent standard error of the mean. The asterisks indicate significance (Kolmogorov-Smirnov test, $P < 0.01$).