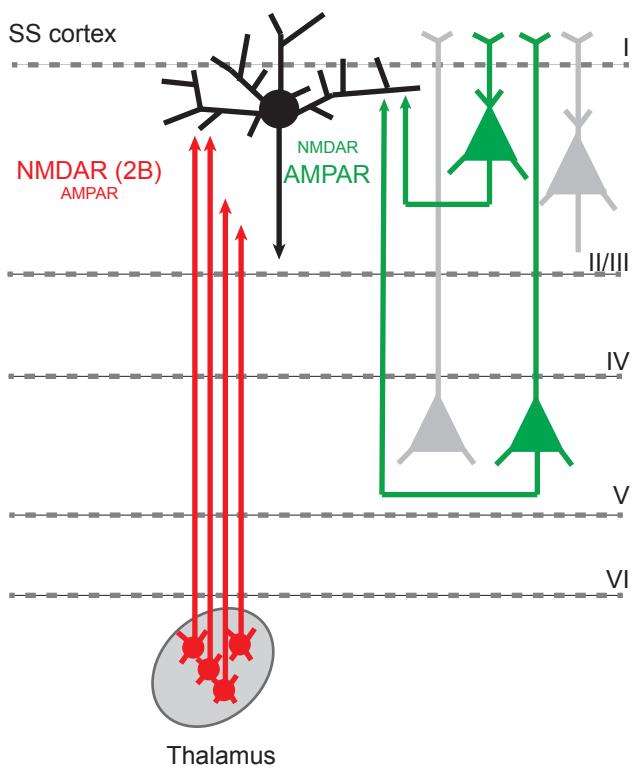
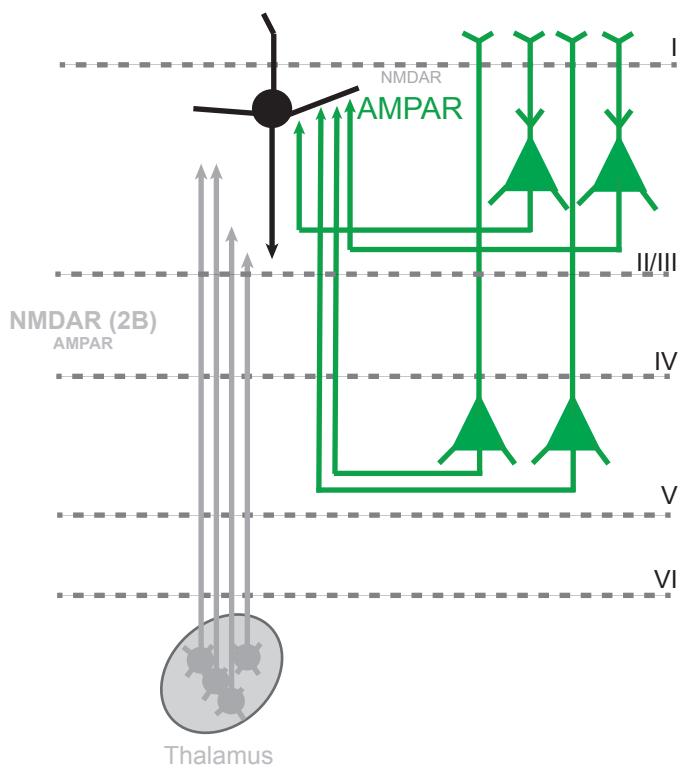


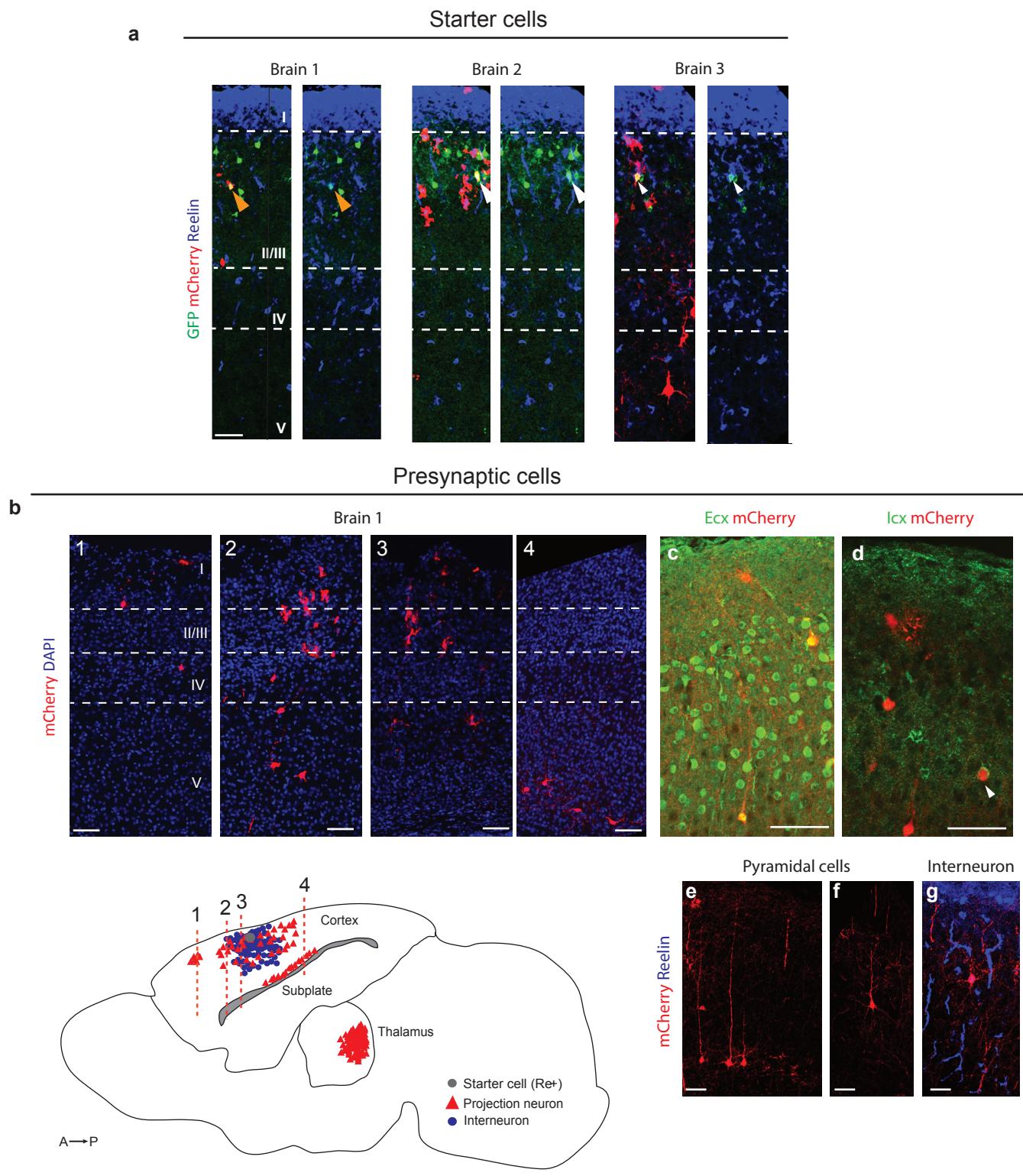
Normal interneuron connectivity



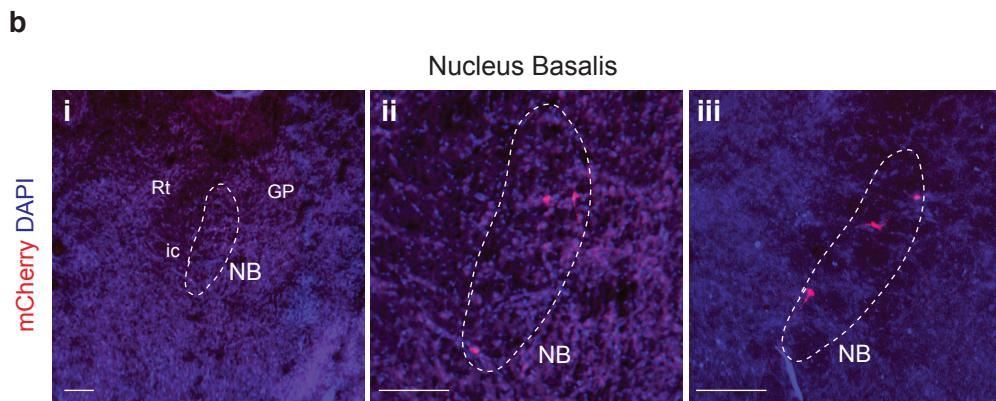
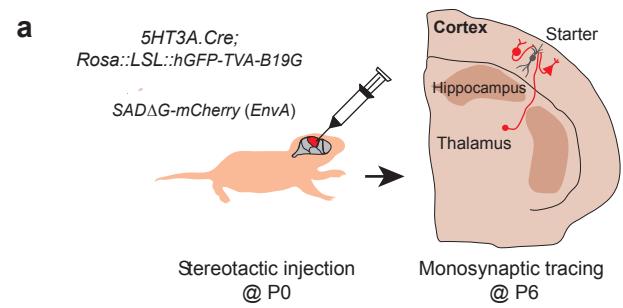
Aberrant interneuron connectivity



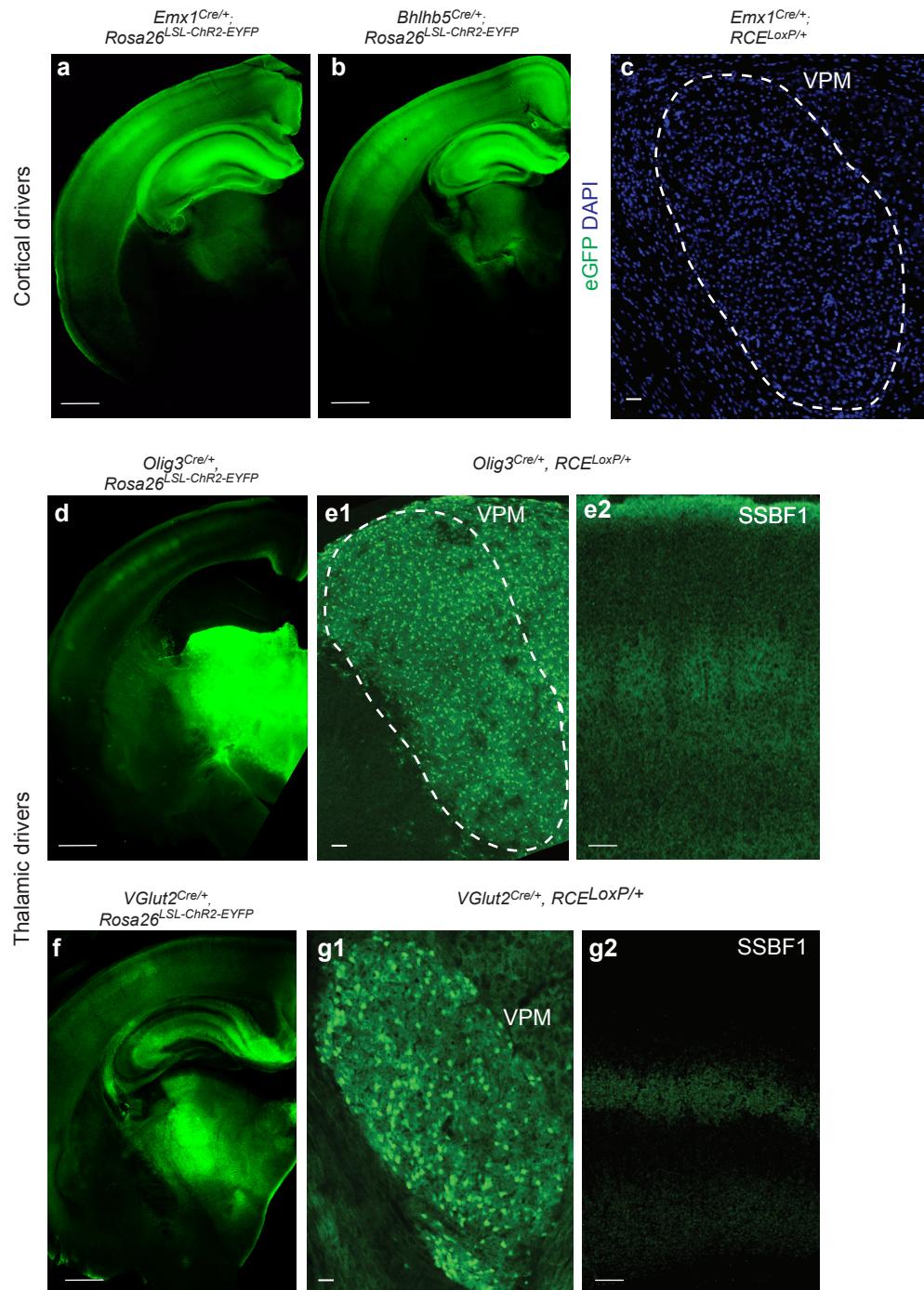
Supplementary Figure 1



**Supplementary Figure 2**



**Supplementary Figure 3**

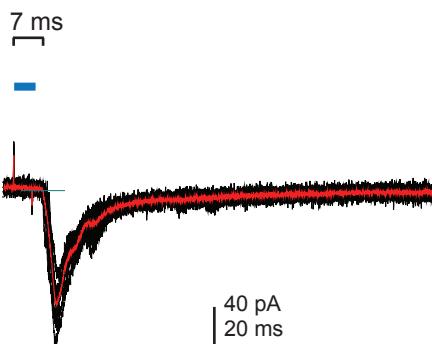


**Supplementary Figure 4**

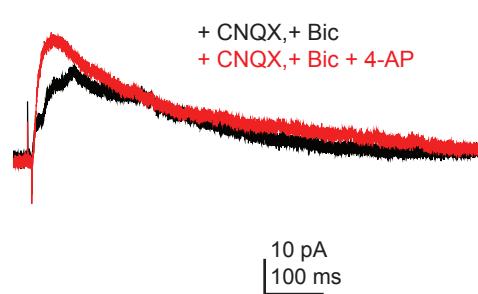
*Olig3Cre/+*  
*Rosa26LSL-ChR2-EYFP*

*VGlut2Cre/+*  
*Rosa26LSL-ChR2-EYFP*

a



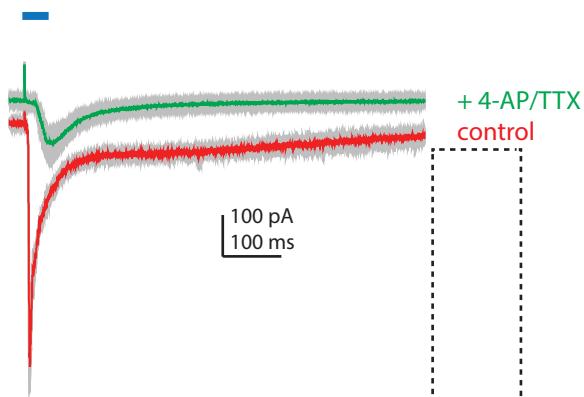
b



c

*VGlut2Cre/+*  
*Rosa26LSL-ChR2-EYFP*

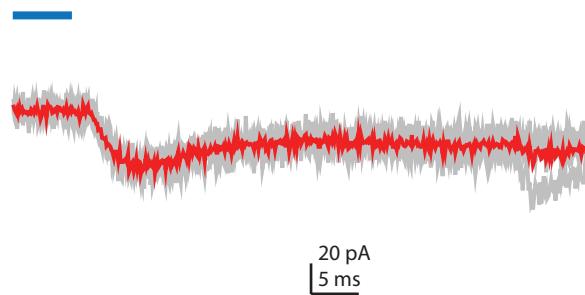
layer1 interneuron\_100 %/50 ms



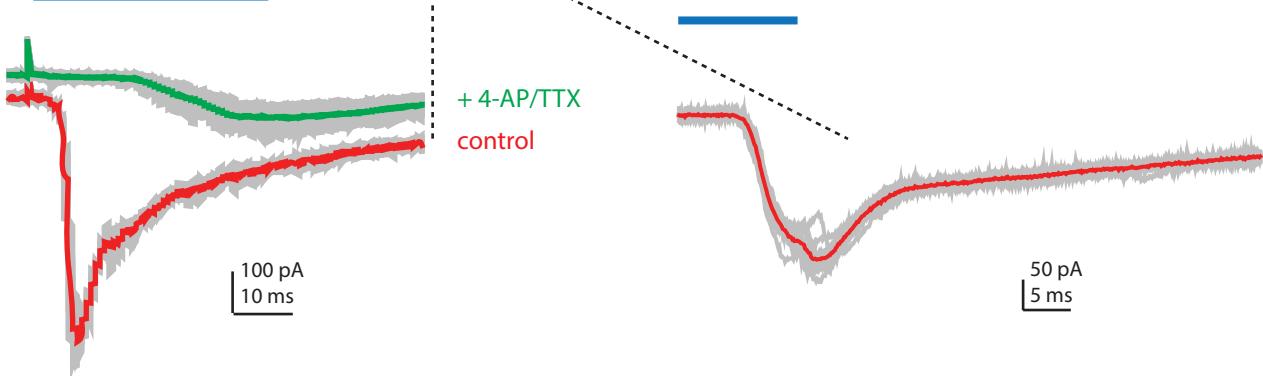
d

VGlut2Cre-AAVflexCh2R thalamic injection

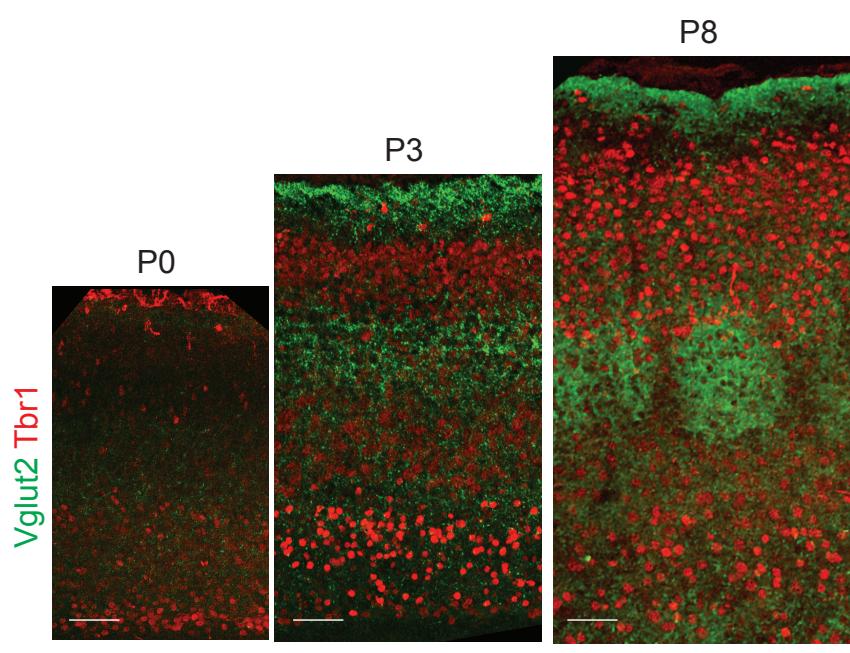
layer4 stellate\_5 %/5 ms



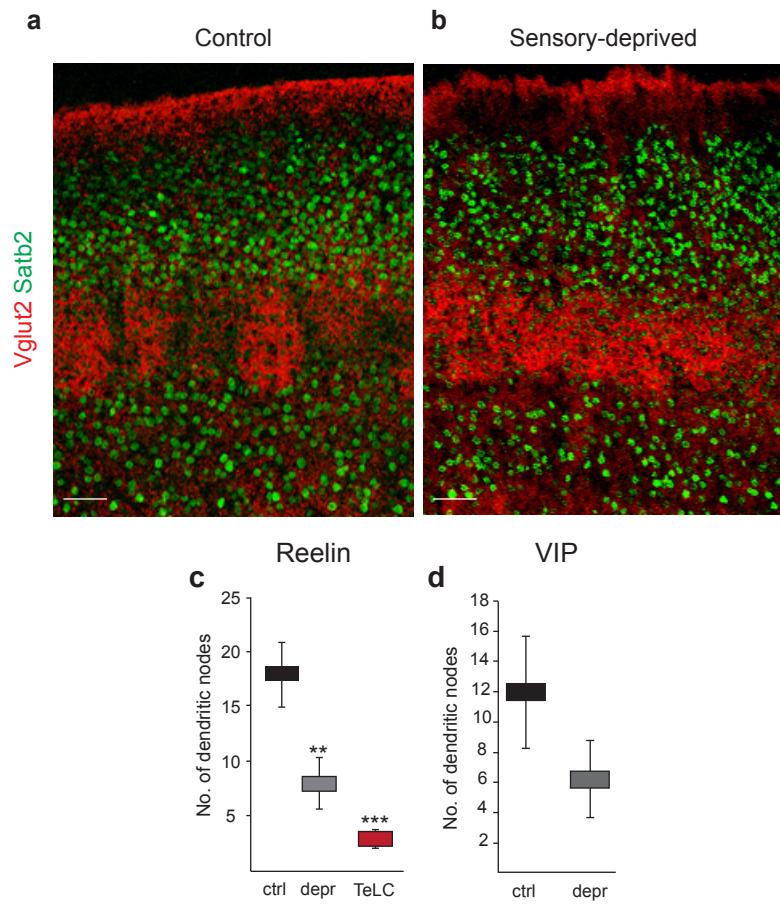
layer1 interneuron\_50 %/10 ms



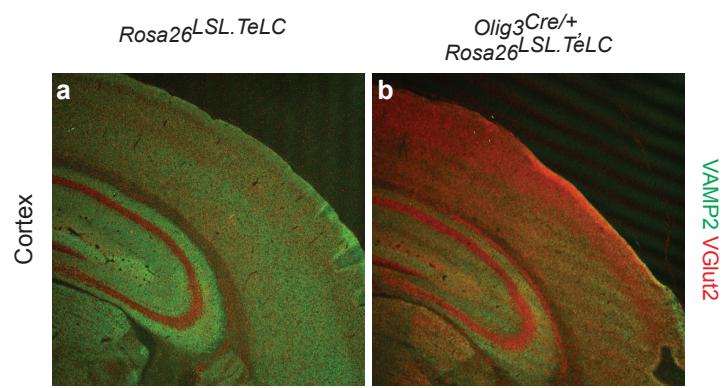
Supplementary Figure 5



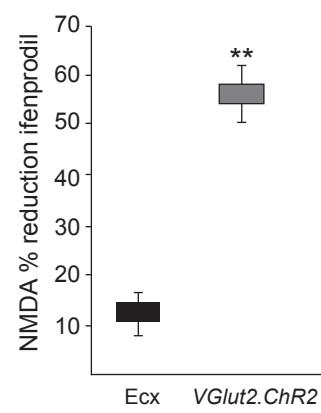
**Supplementary Figure 6**



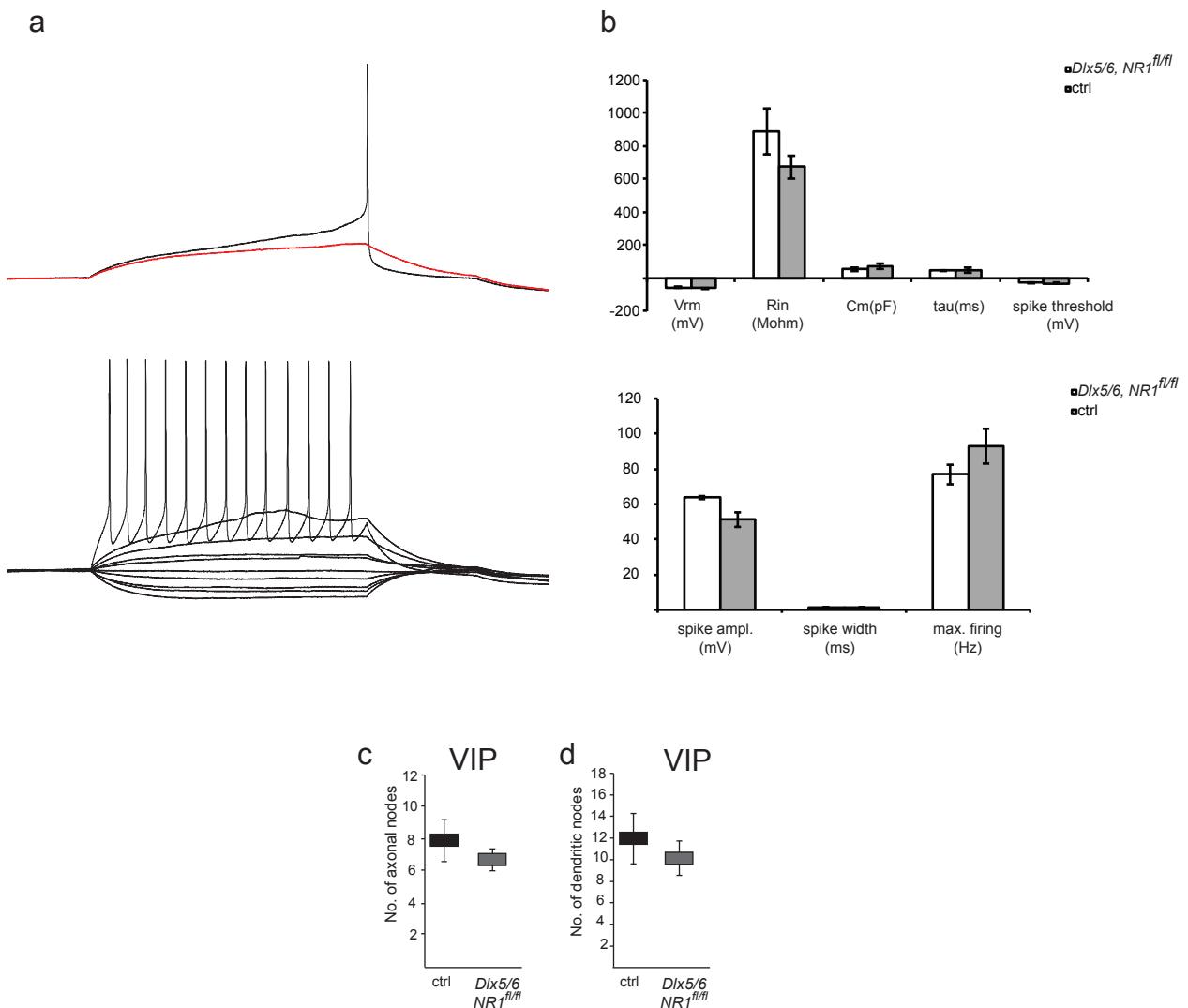
**Supplementary Figure 7**



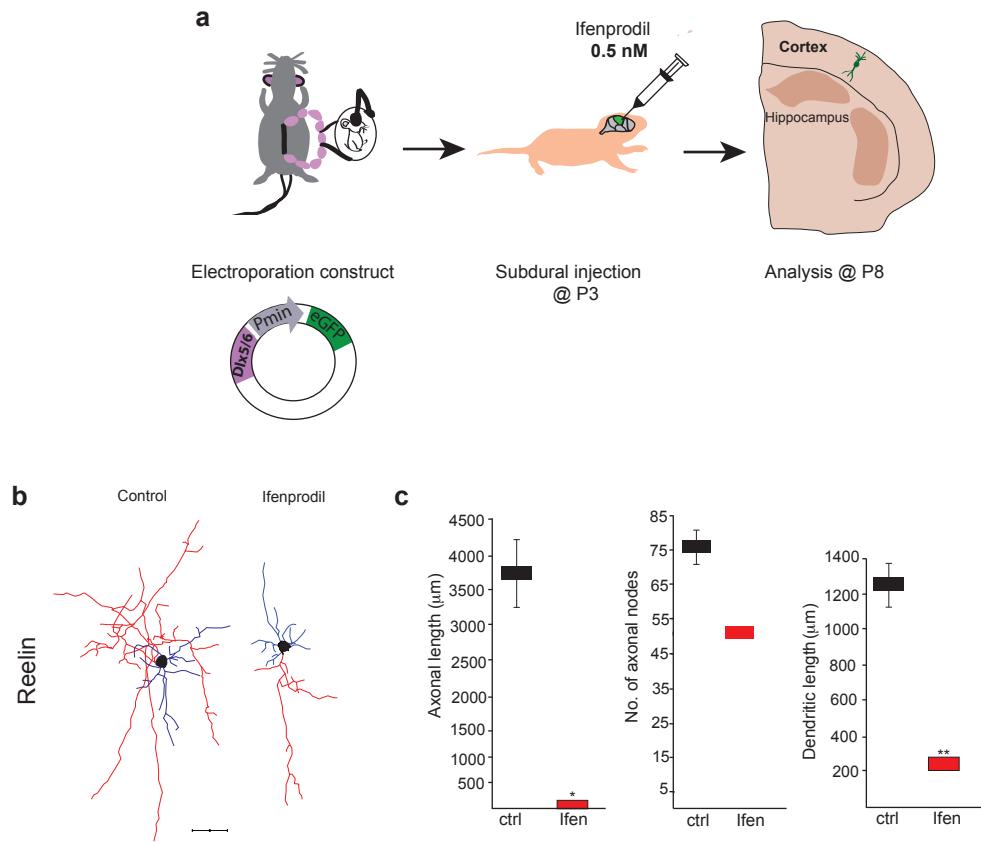
**Supplementary Figure 8**



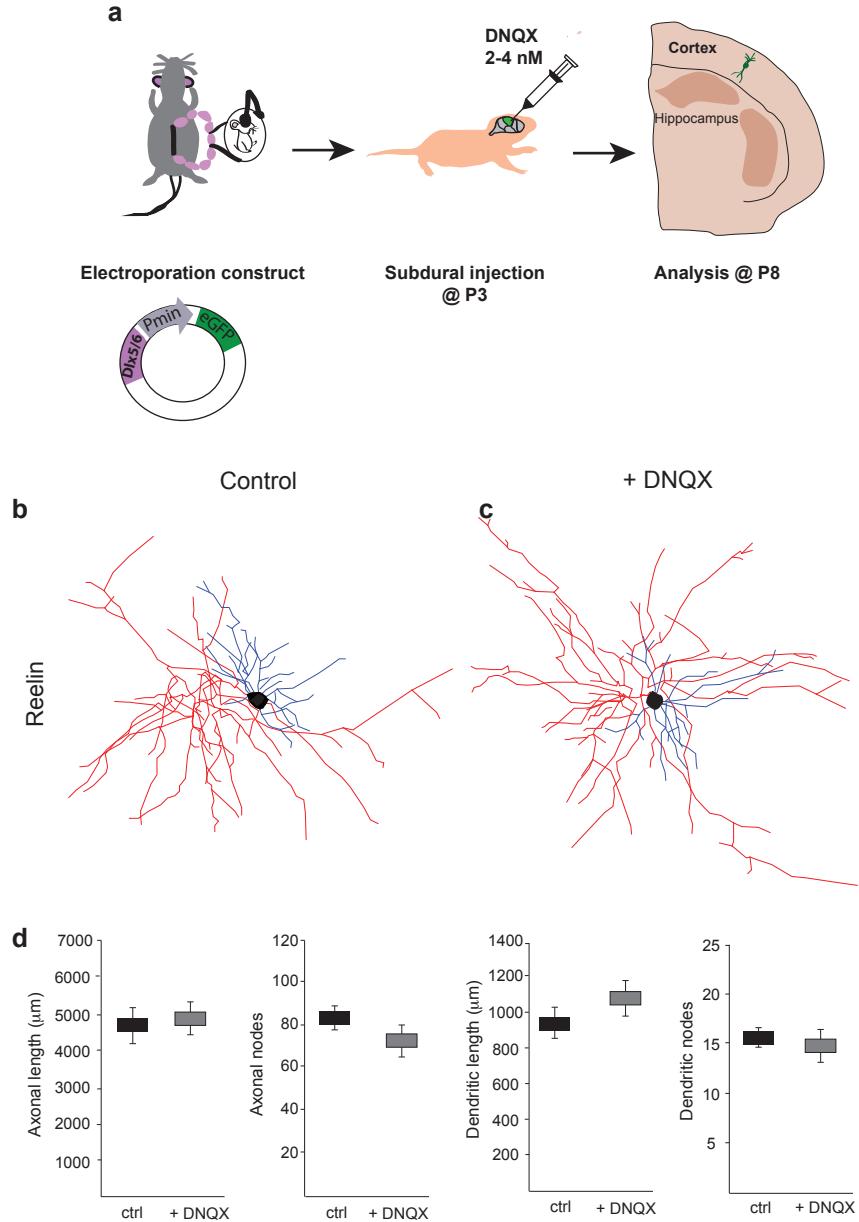
**Supplementary Figure 9**



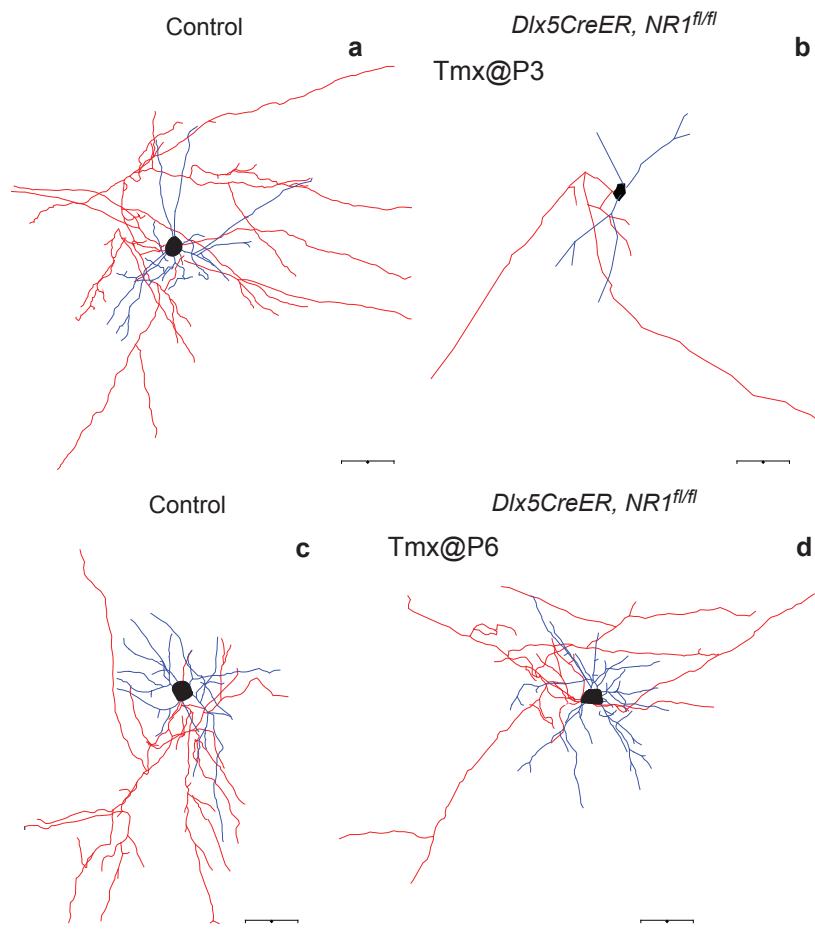
**Supplementary Figure 10**



**Supplementary Figure 11**



**Supplementary Figure 12**



**Supplementary Figure 13**