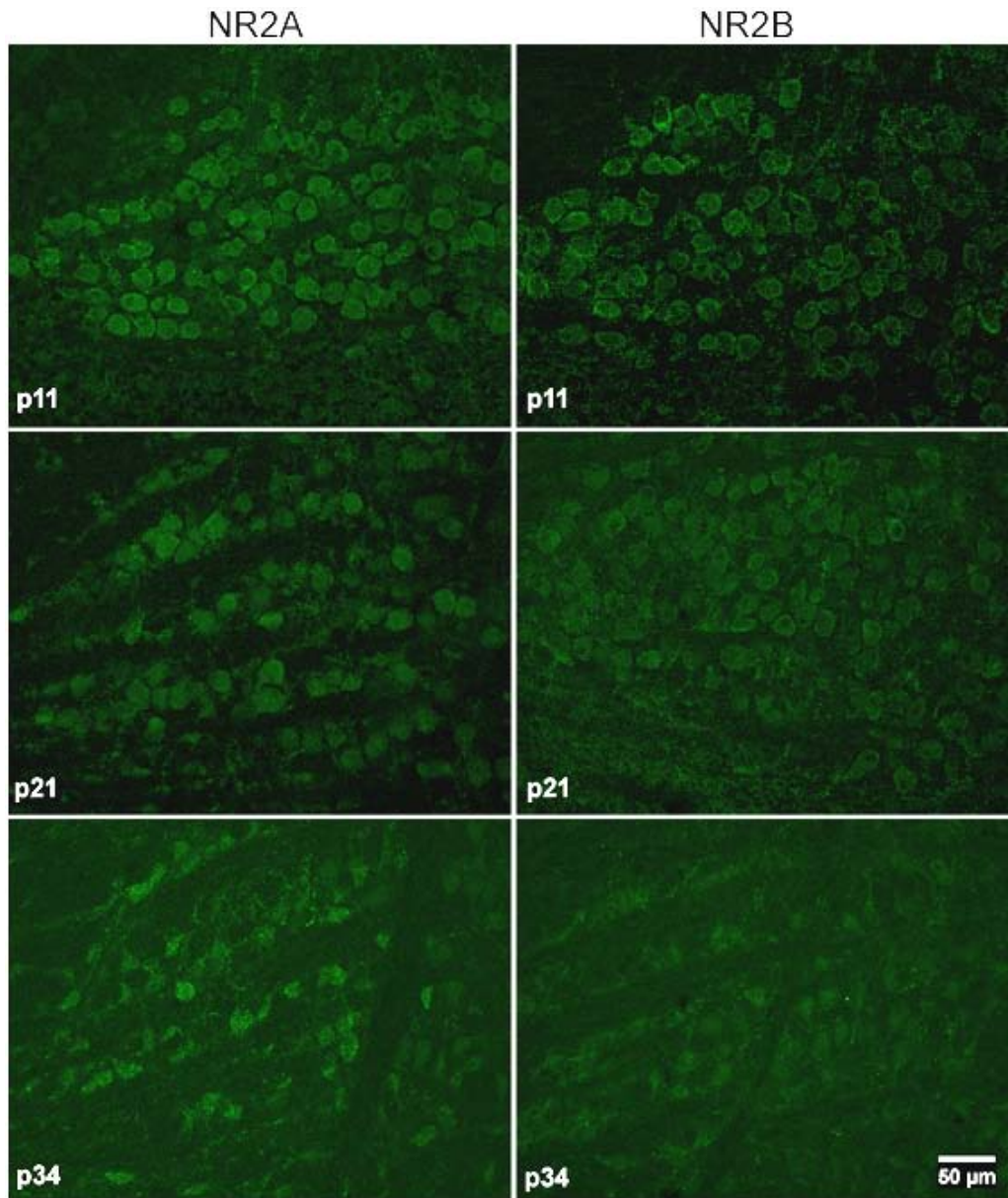


## **Supplementary Information:**

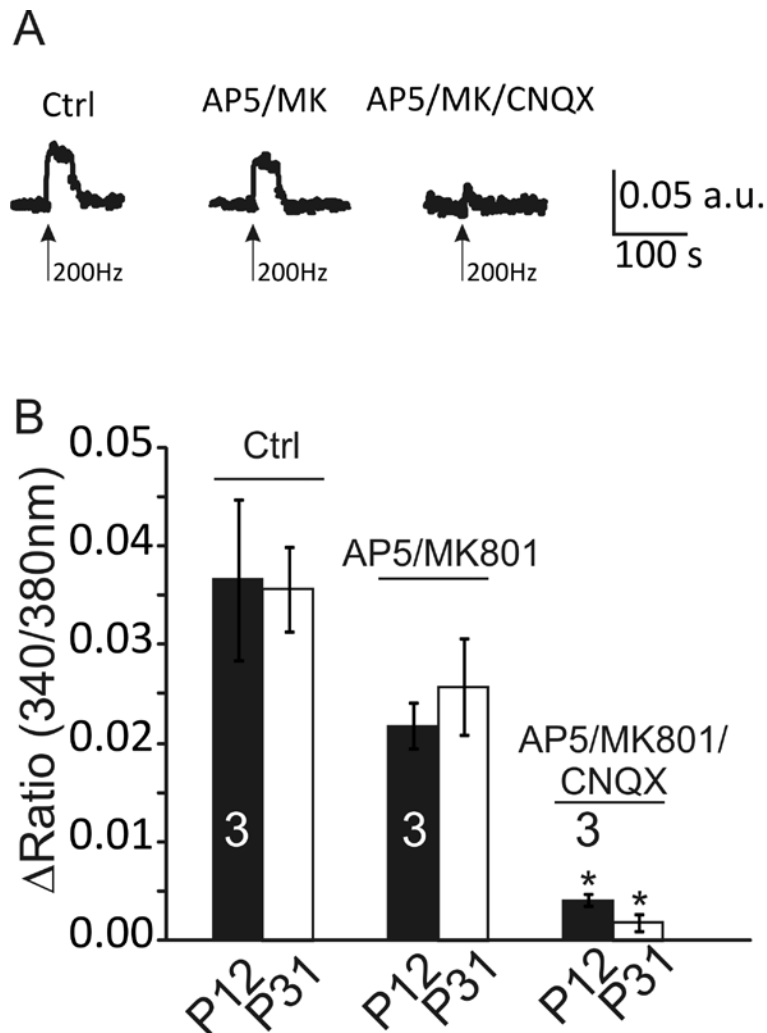
### **NMDAR-mediated EPSCs are maintained and accelerate in time-course during maturation of mouse and rat auditory brainstem, *in vitro***

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**Supplementary Figure 1. Immunohistochemistry of NR2A (left) and NR2B (right) for P11, P21 and P35 rat MNTB.** Similar levels of staining are apparent at P11, but by P35 the staining for NR2A is stronger than for NR2B. Similar data was seen in 3 rats.



**Supplementary Figure 2. NMDAR-dependent  $\text{Ca}^{2+}$  increases at young and mature synapses.** A, 200Hz train for synaptic stimulation, raw traces of 340/380nm Fura 2 ratios from 1 cell under ctrl conditions and following application of AP-5 (50 $\mu\text{M}$ ) and MK 801 (10 $\mu\text{M}$ ) or CNQX (10 $\mu\text{M}$ ). B, 340/380nm Fura 2 plateau ratios are measured following 200Hz trains of synaptic stimulation in MNTB neurons from young (P12, filled) and mature (P31, open) animals. Application of the NMDAR antagonists AP-5 (50 $\mu\text{M}$ ) and MK 801 (10 $\mu\text{M}$ ) suppressed the  $\text{Ca}^{2+}$  response in both ages to a similar degree. Further addition of the AMPAR antagonist CNQX (10 $\mu\text{M}$ ) suppressed almost all of the  $\text{Ca}^{2+}$  response. Data denote means $\pm$ SEM from 3 different cells. Significance was tested using ANOVA,\* indicates significance relative to Ctrl.