

SUPPLEMENTAL TABLE

Parameter	ArcGFP- BAC (Brief experience)		Heterozygous ArcGFP- KI ^{+/-}		ArcGFP-KI ^{-/-} (ArcKO)	ArcGFP- BAC (Repeated Experience)	
	ArcGFP+ n = 10	ArcGFP- n = 10	ArcGFP+ n = 8	ArcGFP+ n=8	ArcGFP+	ArcGFP+ (n=10-18)	ArcGFP- (n=10-18)
mEPSC decay time constant (ms)	7.4 ± 0.4	7.5 ± 0.4	6.4 ± 0.4	6.5 ± 0.3	6 ± 0.7	6.6 ± 0.5	7.2 ± 0.6
Evoked EPSC decay time constant (ms), n=11	31.3± 2.1	35.1 ± 2.1	n.d.	n.d.	n.d.	n.d.	n.d.
Resting membrane potential (mV)	-52 ± 3	-55 ± 2	-58 ± 2	-60 ± 2	-55 ± 2	-56 ± 2	-57 ± 1
Input Resistance (MΩ)	313 ± 34	284 ± 24	317 ± 36	361 ± 61	330 ± 26	323 ± 22	331 ± 38
Whole-cell capacitance (pF)	24 ± 2	25 ± 2	32 ± 2	30 ± 3	27 ± 1	27±1	26±1
Series resistance (MΩ)	23 ± 2	20 ± 2	20 ± 2	17 ± 1	21 ± 2	23 ± 2	22 ± 2

Table S1. Electrophysiological properties of ArcGFP+ and ArcGFP- neurons from novelty-exposed ArcGFP reporter mice (ArcGFP-BAC, heterozygous ArcGFP-KI^{+/-} and homozygous ArcGFP-KI^{-/-} (ArcKO)) were not different. Values represent mean ± SEM. n.d. = not determined. In ArcGFP-BAC mice simultaneous recordings from ArcGFP+ and ArcGFP- neurons were performed. In heterozygous ArcGFP-KI^{+/-} mice consecutive recordings from neighboring ArcGFP+ and ArcGFP- neurons from the same slice were used. Electrophysiological properties of ArcGFP+ and ArcGFP- neurons are similar for ArcGFP-BAC mice exposed to multiple repeated experiences of the same environment. For each parameter tested in the repeated experience group, three ArcGFP+ and ArcGFP- pairs involved consecutive recordings from neighbor cells. All other recordings were simultaneous and from neighbor ArcGFP+ and ArcGFP- neurons. There was also no difference in passive electrophysiological properties for Arc-activated cells between brief and repeated experience groups in ArcGFP-BAC mice.