Supplementary Material

Chronic Lithium Treatment Alters NMDA and AMPA Receptor Synaptic Availability and Dendritic Spine Organization in the Rat Hippocampus

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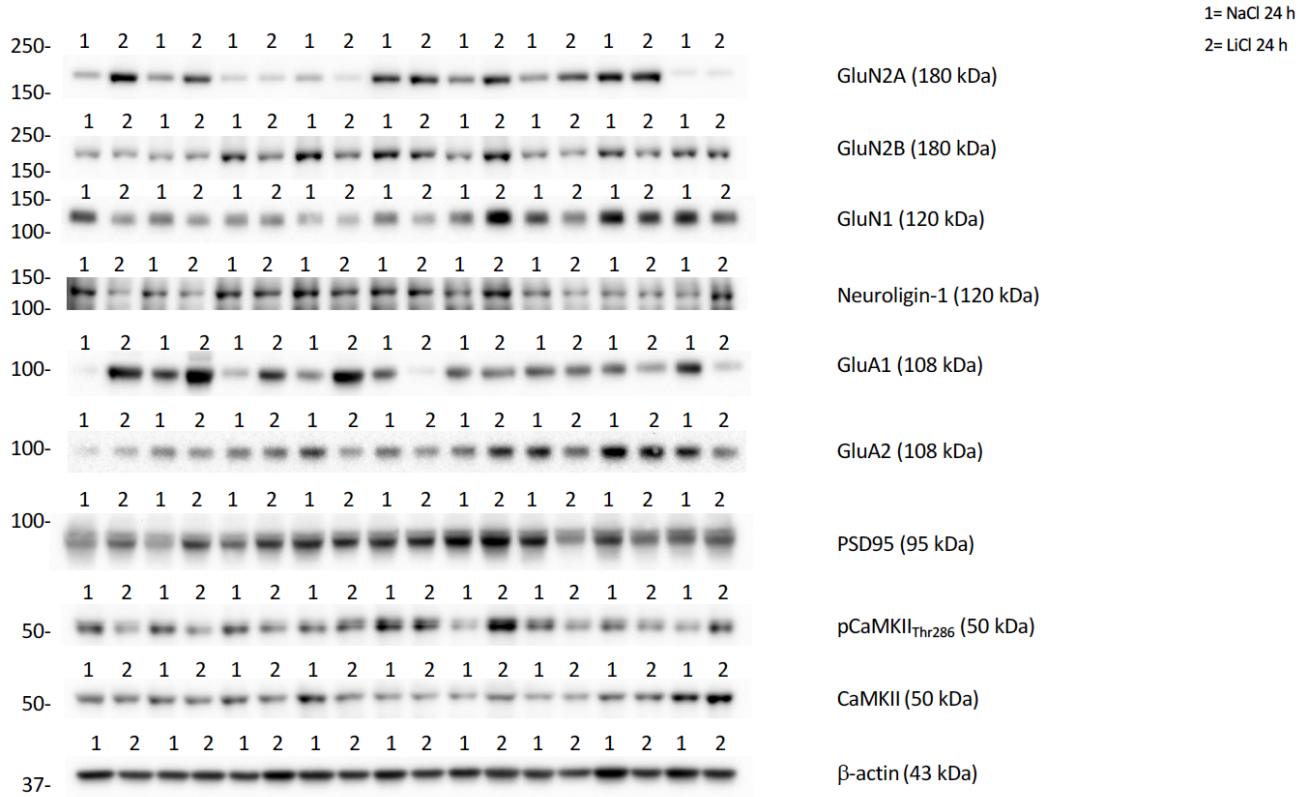
Supplementary figure 1. Cropped immunoblot related to the expression levels of GluN2A, GluN2B, GluN1, Neuroligin-1, GluA1, GluA2, PSD95, pCaMKII$_{Thr286}$, CaMKII, β-actin measured in the **post-synaptic density** of the Hippocampus of rats sacrificed 24 h after the last injection of NaCl or LiCl, presented in figures 1, 3, 4.



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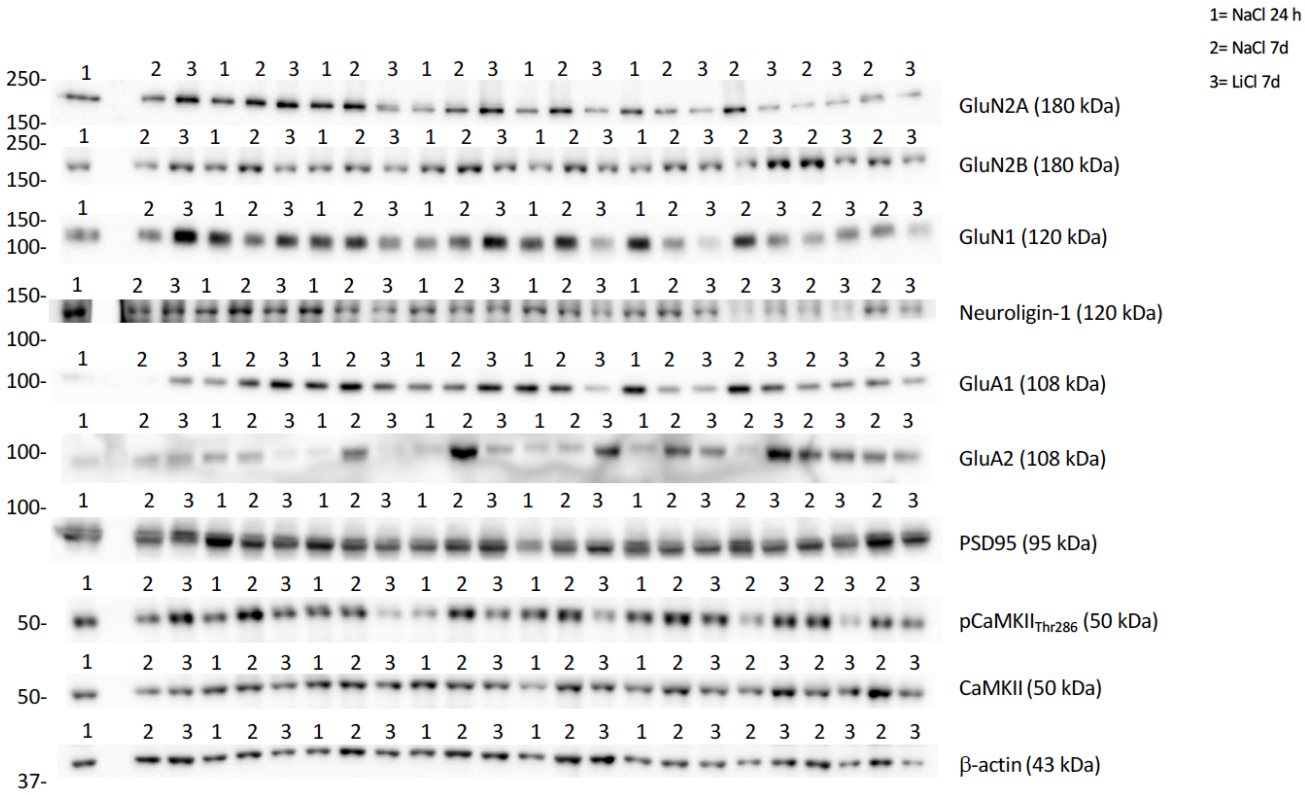
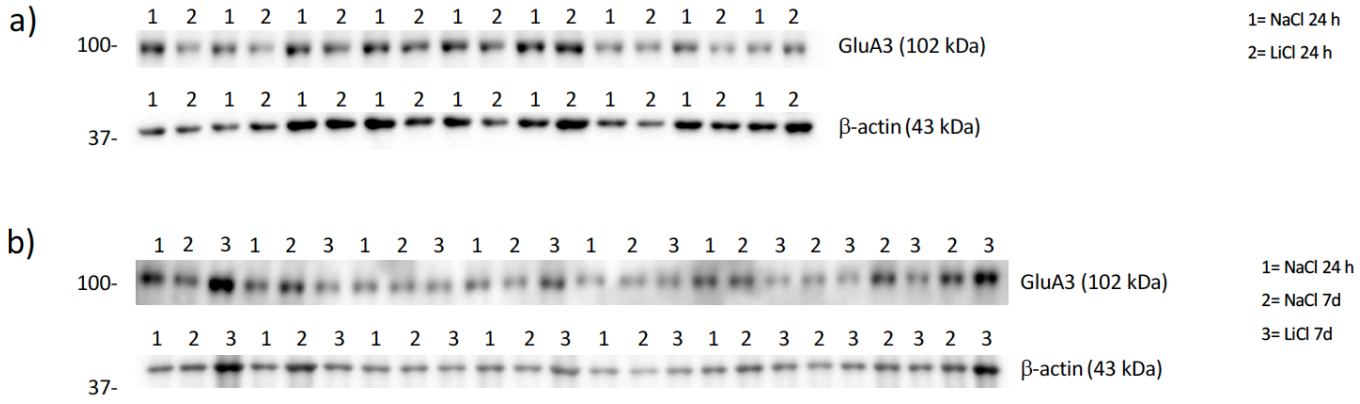
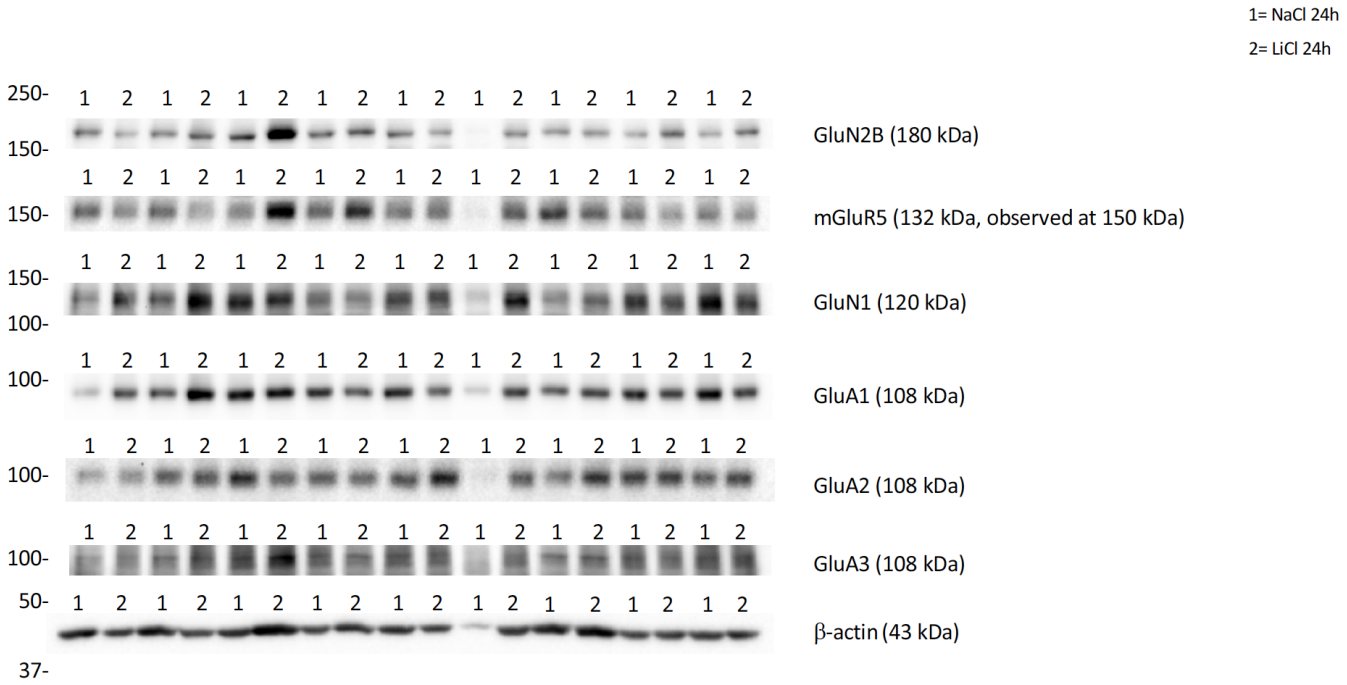
Supplementary figure 2. Cropped immunoblot related to the expression levels of GluN2A, GluN2B, GluN1, Neuroligin-1, GluA1, GluA2, PSD95, pCaMKII$_{Thr286}$, CaMKII, β-actin measured in **the post-synaptic density** of the Hippocampus of rats sacrificed 24 hours and 7 days after the last injection of NaCl or LiCl, presented in figures 1, 3, 4.



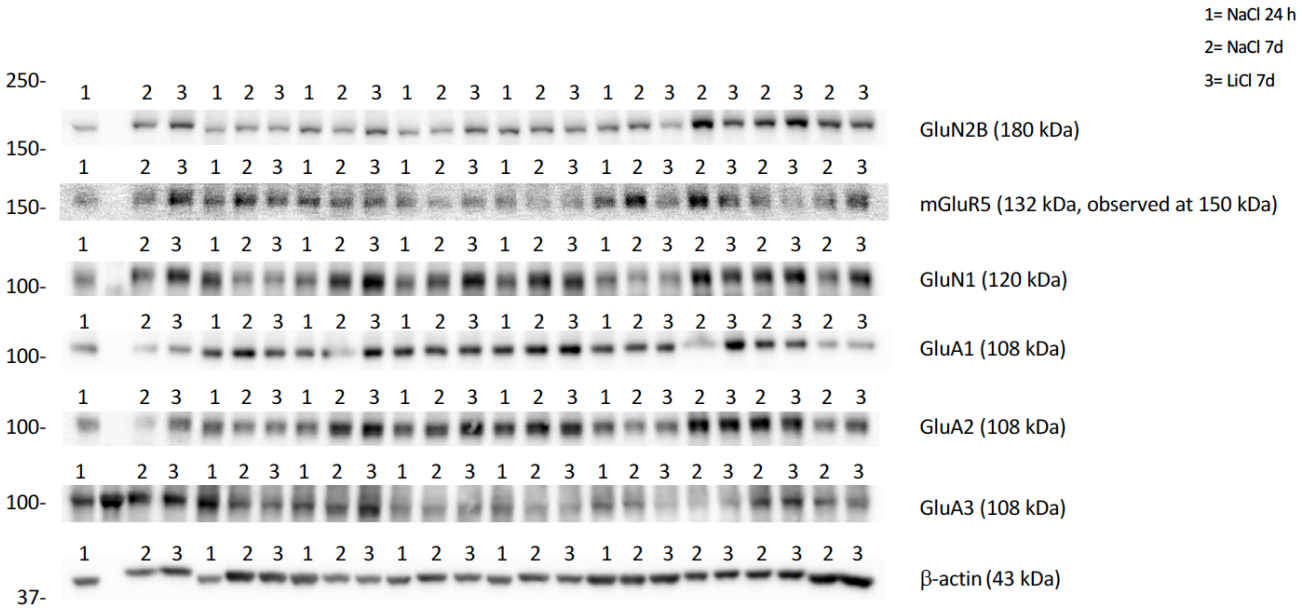
Supplementary figure 3. Cropped immunoblot related to the expression levels of GluA3 and β-actin measured in the **post-synaptic density** of the Hippocampus of rats sacrificed 24 hours (a) and 7 days (b) after the last injection of NaCl or LiCl, presented in figure 3.



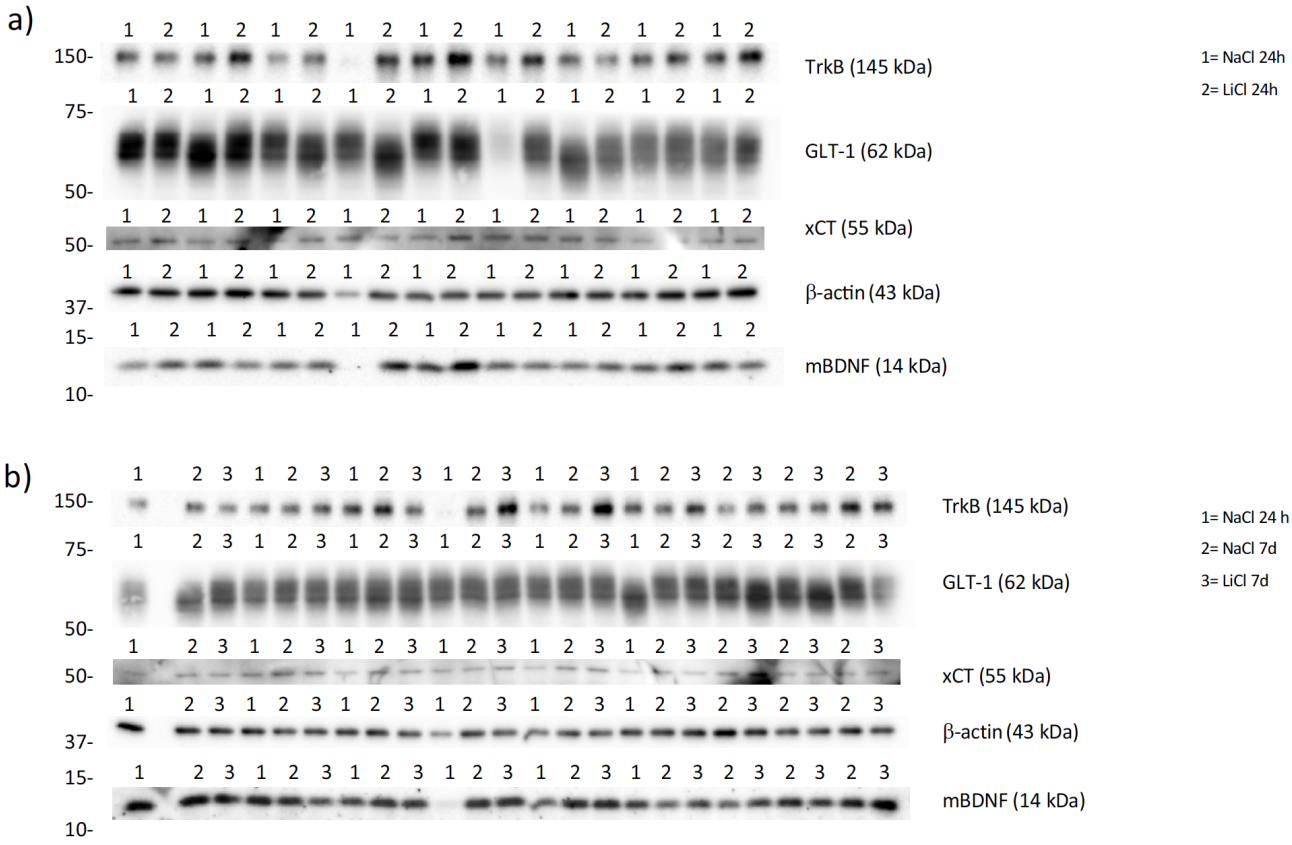
Supplementary figure 4. Cropped immunoblot related to the expression levels of GluN2B, mGluR5, GluN1, GluA1, GluA2, GluA3, β-actin measured in the **extra-synaptic fraction** of Hippocampus of rats sacrificed 24 h after the last injection of NaCl or LiCl, presented in figures 1, 3, 4.



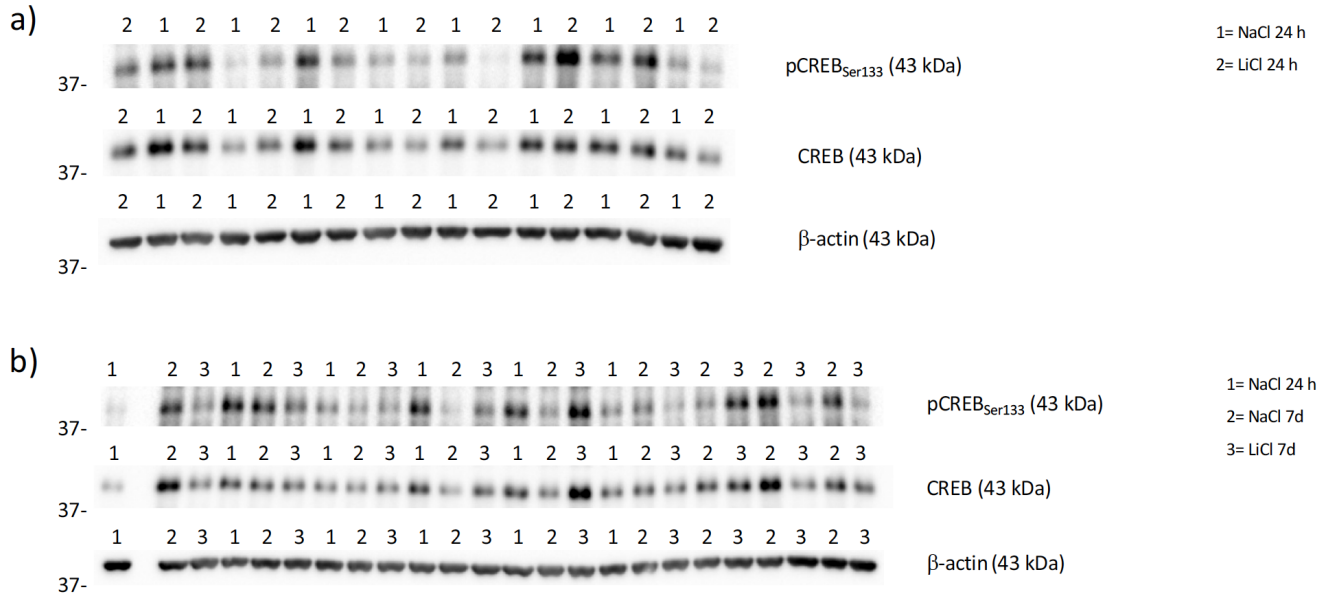
Supplementary figure 5. Cropped immunoblot related to the expression levels of GluN2B, mGluR5, GluN1, GluA1, GluA2, GluA3, β-actin measured in the **extra-synaptic fraction** of Hippocampus of rats sacrificed 24 and 7 days after the last injection of NaCl or LiCl, presented in figures 1, 3, 4



Supplementary figure 6. Cropped immunoblot related to the expression levels of TrkB, GLT-1, xCT, β-actin, and mBDNF measured in the **homogenate** of the Hippocampus of rats sacrificed 24 hours (a) and 7 days (b) after the last injection of NaCl or LiCl, presented in figure 2.



Supplementary figure 7. Cropped immunoblot related to the expression levels of $pCREB_{Ser133}$, CREB, and β-actin measured in the **nuclear fraction** of the Hippocampus of rats sacrificed 24 hours (a) and 7 days (b) after the last injection of NaCl or LiCl, presented in figure 2.



Supplementary Table 1. Effects of LiCl treatment on dendritic spine morphology in the hippocampus of rats sacrificed 24 hours or 7 days after the last exposure. Table (a) shows the percentage of thin-, stubby-shaped spines and filopodia, expressed as mean percentage ± mean standard error. Table (b) shows the length and head width of thin- and stubby-shaped spines, expressed as μm± mean standard error.

a)

	% Thin		**% Stubby**		**% filopodia**	
	NaCl	LiCl	NaCl	LiCl	NaCl	LiCl
24 hours after the last treatment	13,63 ± 3,71	13,70 ± 4,03	21,03 ± 2,80	21,09 ± 2,22	6,14 ± 2,68	4,82 ± 2,09
7 days after the last treatment	7,45 ± 1,98	12,22 ± 3,50	22,31 ± 1,94	21,72 ± 1,24	6,22 ± 1,84	4,74 ± 2,06

b)

	Thin (μm)				**Stubby (μm)**			
	NaCl		LiCl		NaCl		LiCl	
	Spine length	Head width	Spine length	Head width	Spine length	Head width	Spine length	Head width
24 hours after the last treatment	1,27 ± 0,04	0,51 ± 0,05	1,19 ± 0,07	0,43 ± 0,02	0,80 ± 0,01	0,41 ± 0,02	0,79 ± 0,01	0,37 ± 0,02
7 days after the last treatment	1,25 ± 0,02	0,57 ± 0,09	1,27 ± 0,05	0,53 ± 0,03	0,76 ± 0,01	0,36 ± 0,01	0,78 ± 0,01	0,37 ± 0,01