Supporting Information

Mechanism of Inhibition of the GluA2 AMPA Receptor Channel Opening: the Consequence of Addition of an *N*-3 Methylcarbamoyl Group on the Diazepine Ring of 2,3-Benzodiazepine Derivatives[†]

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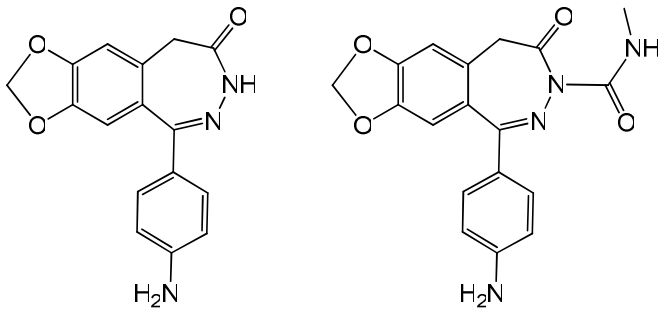
Table S1. Homomeric GluA2Q$_{flip}$ receptors desensitize in two phases (Figure 3D), i.e., a fast desensitizing phase, and a non-desensitizing phase. The amplitudes of the desensitizing and non-desensitizing phases were measured at both closed-channel (determined at 100 μM of glutamate) and open-channel (determined at 3 mM of glutamate) states. The following list shows the ratio of the amplitude of non-desensitizing phase at 3 mM *versus* 100 μM, collected from the same cell. The data are from a total of 8 cells.

	Glu (mM)	A_{des} **(nA)**	$A_{non\text{-}des}$ **(nA)**	$A_{non\text{-}des}/A_{des}$	$A_{non\text{-}des\ (3mM)}/A_{non\text{-}des\ (100\ \mu M)}$
Cell 1	0.1	-0.29	-0.045	15.6%	1.30
	3	-3.72	-0.059	1.6%	
Cell 2	0.1	-0.12	-0.012	10.1%	2.19
	3	-2.27	-0.027	1.2%	
Cell 3	0.1	-0.12	-0.014	12.0%	1.48
	3	-3.38	-0.021	0.6%	
Cell 4	0.1	-0.17	-0.026	15.2%	1.10
	3	-1.91	-0.029	1.5%	
Cell 5	0.1	-0.20	-0.012	6.1%	1.56
	3	-2.29	-0.019	0.8%	
Cell 6	0.1	-0.16	-0.016	10.1%	1.30
	3	-2.66	-0.021	0.8%	
Cell 7	0.1	-0.383	-0.050	13.0%	1.40
	3	-3.88	-0.070	1.8%	
Cell 8	0.1	-0.40	-0.071	17.6%	1.25
	3	-4.51	-0.088	2.0%	
			Average	12.5% 1.3%	1.45

FIGURE S1: Chemical structures of BDZ-2 [1-(4-aminophenyl)-3,5-dihydro-7,8-methylenedioxy-4*H*-2,3-benzodiazepin-4-one] and BDZ-3 [1-(4-aminophenyl)-3-methylcarbamoyl-7,8-methylenedioxy-4*H*-2,3-benzodiazepin-4-one].



BDZ-2 BDZ-3