

Supplementary Material

Activation of protein kinase G after repeated cocaine administration is necessary for the phosphorylation of α -amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid receptor GluA1 at serine 831 in the rat nucleus accumbens

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Supplementary Table S1. Rates of changes in the immunoreactivity of pGluA1-S831 in the NAc after repeated systemic injections of saline or cocaine at different time points

Time (min)	Repeated saline	Repeated cocaine
	Mean \pm SEM	
5	100 \pm 15.412	127.33 \pm 39.443
10	100 \pm 12.428	129.873 \pm 6.131
30	100 \pm 16.493	422.652 \pm 52.047*
60	100 \pm 23.862	264.855 \pm 24.21*
120	100 \pm 4.517	164.846 \pm 15.488 [#]
240	100 \pm 5.722	121.777 \pm 3.903 [#]

* $p < 0.05$ vs. repeated saline group at the same time point; [#] $p < 0.05$ vs. repeated cocaine group at the 30 min time point.

Supplementary Table S2. Rates of changes in the immunoreactivity of pGluA1-S831 in the NAc after intra-NAc infusion of KT5823 or Rp-cGMP prior to the final injection of saline or cocaine

		Repeated saline	Repeated cocaine
	Treatment	Mean \pm SEM	
	Vehicle	100 \pm 14.02	260.8 \pm 22.053*
WB	KT5823	114.225 \pm 3.383	123.575 \pm 14.446 [#]
	Rp-cGMP	113.2 \pm 2.587	88.3 \pm 14.849 [#]
	Vehicle	100 \pm 3.095	193.1 \pm 11.656*
IHC	KT5823	111.525 \pm 4.509	111.025 \pm 8.742 [#]
	Rp-cGMP	107.025 \pm 6.716	113.225 \pm 7.035 [#]

* $p < 0.05$ vs. repeated saline vehicle group; [#] $p < 0.05$ vs. repeated cocaine vehicle group; WB, western immunoblotting; IHC, immunohistochemistry.

Supplementary Table S3. Rates of changes in number of co-localization of pGluA1-S831 with NeuN in the NAc after the intra-NAc infusion of KT5823 or Rp-cGMP prior to the final injection of saline or cocaine

	Repeated saline	Repeated cocaine
Treatment	Mean \pm SEM	
Vehicle	100 \pm 2.68	184.895 \pm 3.815*
KT5823	99.248 \pm 4.4	95.873 \pm 4.09 [#]
Rp-cGMP	106.62 \pm 5.262	88.951 \pm 4.784 [#]

* $p < 0.05$ vs. repeated saline vehicle group; [#] $p < 0.05$ vs. repeated cocaine vehicle group.

Supplementary Table S4. Rates of changes in the immunoreactivity of PKG, pGluA1-S831 or GluA1 in the GluA1 precipitate of the NAc after the repeated systemic injections of saline or cocaine

	Repeated saline	Repeated cocaine
Treatment	Mean \pm SEM	
PKG	100 \pm 5.289	228.4 \pm 13.16*
pGluA1 ^{S831}	100 \pm 11.53	202 \pm 9.809*
GluA1	100 \pm 8.264	106.7 \pm 8.209

* $p < 0.05$ vs. repeated saline group.

Supplementary Table S5. Rates of changes in the immunoreactivity of pGluA1-S831 after intra-NAc infusion of Tat-peptides prior to the final injection of saline or cocaine

Treatment	Repeated saline	Repeated cocaine
	Mean \pm SEM	
Vehicle	100 \pm 2.634	200.74 \pm 2.837*
Tat-GluA1-c (0.2 nmol)	98.36 \pm 2.837	181.64 \pm 11.163*
Tat-GluA1-c (2.0 nmol)	95.48 \pm 0.856	176.46 \pm 10.206*
Tat-GluA1-i (0.2 nmol)	106.96 \pm 4.599	175.62 \pm 3.267*
Tat-GluA1-i (2.0 nmol)	82.3 \pm 3.578	99.82 \pm 6.098 [#]

* $p < 0.05$ vs. repeated saline vehicle group; [#] $p < 0.05$ vs. repeated cocaine vehicle group.

Supplementary Table S6. Rates of changes in the immunoreactivity of PKG or GluA1 in the GluA1 precipitate after the intra-NAc infusion of Tat-peptides prior to the final injection of saline or cocaine

		Repeated saline	Repeated cocaine
Treatment		Mean \pm SEM	
	Vehicle	100 \pm 4.293	214.933 \pm 7.031*
PKG	Tat-GluA1-c (2.0 nmol)	107.667 \pm 8.019	169.267 \pm 13.762*
	Tat-GluA1-i (2.0 nmol)	112.933 \pm 12.203	93.833 \pm 6.912 [#]
	Vehicle	100 \pm 1.02	97 \pm 0.603
GluA1	Tat-GluA1-c (2.0 nmol)	98.1 \pm 2.854	95.233 \pm 6.306
	Tat-GluA1-i (2.0 nmol)	100.8 \pm 0.874	95.1 \pm 4.912

* $p < 0.05$ vs. repeated saline vehicle group; [#] $p < 0.05$ vs. repeated cocaine vehicle group.

Supplementary Table S7. Changes in total distance travelled for 60 min after the intra-NAc infusion of Tat-peptides prior to the final injection of saline or cocaine

	Repeated saline	Repeated cocaine
Treatment	Mean \pm SEM	
Vehicle	1068.9 \pm 144.882	17617.2 \pm 1574.275*
Tat-GluA1-c	1093.5 \pm 83.314	15075.6 \pm 1531.533*
Tat-GluA1-i	863.6 \pm 126.171	5649.4 \pm 379.234#

* $p < 0.05$ vs. repeated saline vehicle group; # $p < 0.05$ vs. repeated cocaine vehicle group.