Supplementary Table 2

Summary of repeated measures ANOVA followed by Sidak post-hoc analysis for chemogenetic manipulation experiments.

Experiment		Fear conditioning		Extinction		Retrieval						
		F (DFn, DFd)	P value	F (DFn, DFd)	P value	Cre-	n	Cre+	n	F (DFn, DFd)	P value	Post-hoc P value
vmITC-KORD extinction	Interaction	F (3, 75) = 0.8528	P=0.4695	F (10, 250) = 0.6599	P=0.7611	**22.5 ± 3.1**	**16**	**37.6 ± 5.2**	**11**	F (1, 25) = 4.828	P=0.0375	**Base** **0.684**
	Trials	F (3, 75) = 79.09	P<0.0001	F (10, 250) = 55.3	P<0.0001					F (1, 25) = 96.36	P<0.0001	**CS** **0.0013**
	Group	F (1, 25) = 0.6231	P=0.4373	F (1, 25) = 0.0499	P=0.8251					F (1, 25) = 8.553	P=0.0072	
bilateral	Interaction	F (3, 54) = 0.3015	P=0.8241	F (10, 180) = 0.7671	P=0.6603			*41.7 ± 13.1*	*4*	F (1, 18) = 5.61	P=0.0293	
	Trials	F (3, 54) = 35.19	P<0.0001	F (10, 180) = 27.93	P<0.0001					F (1, 18) = 56.12	P<0.0001	
	Group	F (1, 18) = 0.0174	P=0.8965	F (1, 18) = 0.06043	P=0.8086					F (1, 18) = 4.088	P=0.0583	
unilateral	Interaction	F (3, 63) = 0.8277	P=0.4836	F (10, 210) = 0.5154	P=0.8783			*35.2 ± 4.4*	*7*	F (1, 21) = 2.651	P=0.1184	Base 0.3991
	Trials	F (3, 63) = 67.17	P<0.0001	F (10, 210) = 40.79	P<0.0001					F (1, 21) = 104.9	P<0.0001	CS 0.0059
	Group	F (1, 21) = 1.593	P=0.2208	F (1, 21) = 0.01253	P=0.9119					F (1, 21) = 7.384	P=0.0129	
vmITC-KORD retrieval	Interaction	F (3, 51) = 0.8326	P=0.4695	F (10, 170) = 0.5599	P=0.8448	**27.3 ± 4.9**	**11**	**45.8 ± 2.7**	**8**	F (1, 17) = 10.15	P=0.0054	**Base** **0.9478**
	Trials	F (3, 51) = 79.81	P<0.0001	F (10, 170) = 22.9	P<0.0001					F (1, 17) = 151.5	P<0.0001	**CS** **0.0005**
	Group	F (1, 17) = 0.3491	P=0.4373	F (1, 17) = 0.00388	P=0.9511					F (1, 17) = 7.407	P=0.0145	
bilateral	Interaction	F (3, 45) = 2.006	P=0.1266	F (10, 150) = 0.3327	P=0.9711			*47.2 ± 2.8*	*6*	F (1, 15) = 9.225	P=0.0083	Base 0.9653
	Trials	F (3, 45) = 66.54	P<0.0001	F (10, 150) = 19.2	P<0.0001					F (1, 15) = 121.8	P<0.0001	CS 0.001
	Group	F (1, 15) = 0.9281	P=0.3506	F (1, 15) = 1.446e-005	P=0.9970					F (1, 15) = 6.776	P=0.0200	
unilateral	Interaction	F (3, 33) = 0.6634	P=0.5805	F (10, 110) = 0.7059	P=0.7172			*41.7 ± 8.3*	*2*	F (1, 11) = 1.472	P=0.2504	
	Trials	F (3, 33) = 60.81	P<0.0001	F (10, 110) = 8.36	P<0.0001					F (1, 11) = 35.12	P<0.0001	
	Group	F (1, 11) = 0.5037	P=0.4927	F (1, 11) = 0.0177	P=0.8966					F (1, 11) = 1.248	P=0.2877	
vmITC-Gq-D retrieval	Interaction	F (3, 57) = 1.51	P=0.2217	F (2, 38) = 1.475	P=0.2415	**57.3 ± 4.6**	**15**	**38.9 ± 6.1**	**6**	F (1, 19) = 4.727	P=0.0425	**Base** **0.8994**
	Trials	F (3, 57) = 68.81	P<0.0001	F (2, 38) = 160.2	P<0.0001					F (1, 19) = 149.9	P<0.0001	**CS** **0.0079**
	Group	F (1, 19) = 1.641	P=0.2156	F (1, 19) = 0.0096	P=0.9230					F (1, 19) = 4.821	P=0.0407	
bilateral	Interaction	F (3, 48) = 0.5813	P=0.6302	F (3, 48) = 0.5813	P=0.6302			*45.6 ± 8.9*	*3*	F (1, 16) = 1.119	P=0.3058	
	Trials	F (3, 48) = 37.5	P<0.0001	F (3, 48) = 37.5	P<0.0001					F (1, 16) = 97.37	P<0.0001	
	Group	F (1, 16) = 0.6786	P=0.4222	F (1, 16) = 0.6786	P=0.4222					F (1, 16) = 1.049	P=0.3209	
unilateral	Interaction	F (3, 48) = 1.07	P=0.3707	F (2, 32) = 0.8408	P=0.4407			*32.2 ± 7.8*	*3*	F (1, 16) = 4.873	P=0.0422	Base 0.892
	Trials	F (3, 48) = 36.13	P<0.0001	F (2, 32) = 90.09	P<0.0001					F (1, 16) = 73.53	P<0.0001	CS 0.0073

	Group	F (1, 16) = 1.061	P=0.3183	F (1, 16) = 0.7701	P=0.3932					F (1, 16) = 5.09	P=0.0384		
dmITC-Gq-D retrieval	Interaction	F (3, 54) = 0.4647	P=0.7081	F (10, 180) = 0.6699	P=0.7514	**28.5 ± 3.3**	**13**	**45.7 ± 7.6**	**7**	F (1, 18) = 6.631	P=0.0191	**Base**	**0.9849**
	Trials	F (3, 54) = 84.85	P<0.0001	F (10, 180) = 64.94	P<0.0001					F (1, 18) = 112.3	P<0.0001	**CS**	**0.0044**
	Group	F (1, 18) = 0.1635	P=0.6907	F (1, 18) = 1.042	P=0.3210					F (1, 18) = 4.737	P=0.0431		
bilateral	Interaction	F (3, 45) = 0.5395	P=0.6577	F (10, 150) = 0.6676	P=0.7531			*51.3 ± 8.5*	*5*	F (1, 15) = 6.28	P=0.0242		
	Trials	F (3, 45) = 67.3	P<0.0001	F (10, 150) = 39.1	P<0.0001					F (1, 15) = 92.19	P<0.0001		
	Group	F (1, 15) = 0.181	P=0.6766	F (1, 15) = 0.3969	P=0.5382					F (1, 15) = 4.101	P=0.0610		
unilateral	Interaction	F (3, 42) = 0.645	P=0.5905	F (10, 140) = 0.7389	P=0.6868			*31.7 ± 15.0*	*2*	F (1, 14) = 2.867	P=0.1126		
	Trials	F (3, 42) = 42.62	P<0.0001	F (10, 140) = 34.55	P<0.0001					F (1, 14) = 60.57	P<0.0001		
	Group	F (1, 14) = 2.117	P=0.1677	F (1, 14) = 0.7032	P=0.4158					F (1, 14) = 2.8	P=0.1164		
dmITC-KORD retrieval	Interaction	F (3, 72) = 0.1379	P=0.9370	F (2, 48) = 0.6476	P=0.5278	**55.8 ± 4.2**	**15**	**30.9 ± 4.8**	**11**	F (1, 24) = 15.28	P=0.0007	**Base**	**0.8952**
	Trials	F (3, 72) = 100.4	P<0.0001	F (2, 48) = 220.6	P<0.0001					F (1, 24) = 180.1	P<0.0001	**CS**	**<0.0001**
	Group	F (1, 24) = 0.6777	P=0.4185	F (1, 24) = 0.4069	P=0.5296					F (1, 24) = 12.28	P=0.0018		
bilateral	Interaction	F (3, 51) = 0.4864	P=0.6932	F (2, 34) = 2.621	P=0.0874			*22.5 ± 7.3*	*4*	F (1, 17) = 12.89	P=0.0023	Base	0.8888
	Trials	F (3, 51) = 37.9	P<0.0001	F (2, 34) = 99.77	P<0.0001					F (1, 17) = 70.84	P<0.0001	CS	<0.0001
	Group	F (1, 17) = 2.566	P=0.1276	F (1, 17) = 2.187	P=0.1575					F (1, 17) = 11.03	P=0.0040		
unilateral	Interaction	F (3, 60) = 0.1776	P=0.9112	F (2, 40) = 0.001963	P=0.9980			*35.7 ± 5.9*	*7*	F (1, 20) = 7.492	P=0.0127	Base	0.9557
	Trials	F (3, 60) = 86.85	P<0.0001	F (2, 40) = 195.3	P<0.0001					F (1, 20) = 148.1	P<0.0001	CS	0.0018
	Group	F (1, 20) = 0.00021	P=0.9887	F (1, 20) = 0.0539	P=0.8188					F (1, 20) = 5.856	P=0.0252		
both ITC-KORD retrieval	Interaction	F (3, 78) = 0.8838	P=0.4533	F (10, 260) = 0.6105	P=0.8045	**27.3 ± 2.7**	**17**	**46.4 ± 4.4**	**11**	F (1, 26) = 11.86	P=0.0020	**Base**	**0.688**
	Trials	F (3, 78) = 102.3	P<0.0001	F (10, 260) = 58.16	P<0.0001					F (1, 26) = 195.7	P<0.0001	**CS**	**<0.0001**
	Group	F (1, 26) = 0.02319	P=0.8801	F (1, 26) = 0.06923	P=0.7945					F (1, 26) = 15.36	P=0.0006		
bilateral	Interaction	F (3, 63) = 0.2094	P=0.8895	F (10, 210) = 0.5152	P=0.8784			*43.9 ± 7.7*	*6*	F (1, 21) = 5.318	P=0.0314	Base	0.8511
	Trials	F (3, 63) = 68.77	P<0.0001	F (10, 210) = 37.58	P<0.0001					F (1, 21) = 107.8	P<0.0001	CS	0.0022
	Group	F (1, 21) = 0.05664	P=0.8142	F (1, 21) = 0.03086	P=0.8622					F (1, 21) = 6.987	P=0.0152		
unilateral	Interaction	F (3, 60) = 1.18	P=0.3251	F (10, 200) = 0.721	P=0.7042			*49.3 ± 3.2*	*5*	F (1, 20) = 10.24	P=0.0045	Base	0.6621
	Trials	F (3, 60) = 53.83	P<0.0001	F (10, 200) = 32.47	P<0.0001					F (1, 20) = 137.2	P<0.0001	CS	<0.0001
	Group	F (1, 20) = 0.000214	P=0.9885	F (1, 20) = 0.05034	P=0.8247					F (1, 20) = 19.33	P=0.0003		