Supplemental Digital Content 1_Statistical Results

Figure	Assay Performed	Time (post-anesthesia)	Number of cells (mouse)	Figure	Parameter	Descriptive statistic (mean, SD)	Statistical Test and significance
1	miniature Excitatory synaaptic transmission (mEPSC)	6 hr	Control = 15(3) , Anesthesia = 16(3)	Fig1. b	Amplitude (pA)	Control = 18.57, 1.84, Anesthesia = 19.54, 1.32	1) Normality test with Shapiro-Wilk test result: p-value=0.4198, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.2292, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.1019, 95% CI=(-0.2027208, 2.1273797), interpretation: there is no evidence to reject the null hypothesis
					Frequency (Hz)	Control = 8.53, 2.87, Anesthesia = 11.09, 2.58	1) Normality test with Shapiro-Wilk test result: p-value=0.2084, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.7024, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.02137, 95% CI=(0.379782, 4.385774), interpretation: there is evidence to reject the null hypothesis, difference in mean frequency
	miniature Inhibitory synaaptic transmission (mIPSC)	6 hr	Control = 18(4) , Anesthesia = 21(4)	Fig1. d	Amplitude (pA)	Control = 35.71, 6.02, Anesthesia = 38.07, 7.36	1) Normality test with Shapiro-Wilk test result: p-value=0.6187, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.3969, accept homoscedasticity assumption. 3) Independent t-test result: p-value= 0.2857, 95% CI(-6.768006 2.052651), interpretation: there is no evidence to reject the null hypothesis
					Frequency (Hz)	Control = 10.18, 4.66, Anesthesia = 6.88, 2.15	1) Normality test with Shapiro-Wilk test result: p-value=0.6653, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.001414, reject homoscedasticity assumption. 3) Welch's t-test result: p-value= 0.01092, 95% CI(0.8348052 5.7707504), interpretation: there is evidence to reject the null hypothesis
	miniature Excitatory synaaptic transmission (mEPSC)	5 days	Control = 13(3), Anesthesia = 12(3)	Fig1. f	Amplitude (pA)	Control = 17.90, 2.67, Anesthesia = 18.13, 2.83	1) Normality test with Shapiro-Wilk test result: p-value=0.8602, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.8487, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.8332, 95% CI=(-2.038016, 2.505965), interpretation: there is no evidence to reject the null hypothesis
					Frequency (Hz)	Control = 7.87, 4.13, Anesthesia = 10.86, 6.47	1) Normality test with Shapiro-Wilk test result: p-value=0.01764, reject normality assumption. 2) Nonparametric test(Kruskal-Wallis test) result: p-value=0.2534, interpretation: there is no evidence to reject the null hypothesis

	miniature Inhibitory synaaptic transmission (mIPSC)	5 days	Control = 14(3), Anesthesia = 15(3)	Fig1. h	Amplitude (pA)	Control = 60.09, 13.67, Anesthesia = 57.25, 17.57	1) Normality test with Shapiro-Wilk test result: p-value=0.03587, reject normality assumption. 2) Non-parametric test(Kruskal-Wallis test) result: p-value=0.4509, interpretation: there is no evidence to reject the null hypothesis
					Frequency (Hz)	Control = 4.69, 1.43, Anesthesia = 4.17, 1.33	1) Normality test with Shapiro-Wilk test result: p-value=0.8139, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.7821, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.3228, 95% CI(-0.534905 1.566175), interpretation: there is no evidence to reject the null hypothesis
Figure	**Assay Performed**	**Time (post-anesthesia)**	**Number of mice**	**Figure**	**Parameter**	**Descriptive statistic (mean, SD)**	**Statistical Test and significance**
	Western blot, postsynaptic density-95 (PSD-95)	0 hour	Control = 4, Anesthesia = 5	Fig2.e	Band intensity	Control = 1.00, 0.20, Anesthesia = 1.25, 0.64	1) Normality test with Shapiro-Wilk test result: p-value=0.3888, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.0824, accept homoscedasticity assumption. 3) Independent t-test, Bonferroni correction result: p-value=0.4778, 95% CI=(-1.044, 0.5413), interpretation: there is no evidence to reject the null hypothesis
		3 hour	Control = 4, Anesthesia = 5			Control = 1.00, 0.22, Anesthesia = 0.94, 0.21	1) Normality test with Shapiro-Wilk test result: p-value=0.9773, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.9208, accept homoscedasticity assumption. 3) Independent t-test, Bonferroni correction result: p-value=0.6972, 95% CI=(-0.2818, 0.3984), interpretation: there is no evidence to reject the null hypothesis
		6 hour	Control = 4, Anesthesia = 4			Control = 1.00, 0.09, Anesthesia = 2.25, 1.00	1) Normality test with Shapiro-Wilk test result: p-value=0.52, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.0032, reject homoscedasticity assumption. 3) Welch's t-test, Bonferroni correction result: p-value=0.0482, 95% CI=(-2.482, -0.01348), interpretation: there is no evidence to reject the null hypothesis
		9 hour	Control = 3, Anesthesia = 4			Control = 1.00, 0.42, Anesthesia = 1.56, 0.71	1) Normality test with Shapiro-Wilk test result: p-value=0.5513, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.485, accept homoscedasticity assumption. 3) Independent t-test, Bonferroni correction result: p-value=0.2868, 95% CI=(-1.663, 0.6097), interpretation: there is no evidence to reject the null hypothesis
		0 hour	Control = 4, Anesthesia = 5			Control = 1.00, 0.22, Anesthesia = 1.03, 0.45	1) Normality test with Shapiro-Wilk test result: p-value=0.5567, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.2518, accept homoscedasticity assumption. 3) Independent t-test, Bonferroni correction result: p-value=0.9047, 95% CI=(-0.6254, 0.5630), interpretation: there is no evidence to reject the null hypothesis

2	Western blot, GluA1 (α-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid (AMPA) receptor subunit)	3 hour	Control = 4, Anesthesia = 5	Fig2.f	Band intensity	Control = 1.00, 0.45, Anesthesia = 1.29, 0.32	1) Normality test with Shapiro-Wilk test result: p-value=0.2079, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.5442, accept homoscedasticity assumption. 3) Independent t-test, Bonferroni correction result: p-value=0.3019, 95% CI=(-0.8911, 0.3203), interpretation: there is no evidence to reject the null hypothesis
		6 hour	Control = 4, Anesthesia = 4			Control = 1.00, 0.20, Anesthesia = 1.39, 0.21	1) Normality test with Shapiro-Wilk test result: p-value=0.6568, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.9104, accept homoscedasticity assumption. 3) Independent t-test, Bonferroni correction result: p-value=0.0340, 95% CI=(-0.7420, -0.04109), interpretation: there is no evidence to reject the null hypothesis
		9 hour	Control = 3, Anesthesia = 4			Control = 1.00, 0.67, Anesthesia = 2.05, 0.13	1) Normality test with Shapiro-Wilk test result: p-value=0.5927, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.03493, reject homoscedasticity assumption. 3) Welch's t-test, Bonferroni correction result: p-value=0.1176, 95% CI=(-2.101, 0.4985), interpretation: there is no evidence to reject the null hypothesis
	Western blot, GluA2 (AMPA receptor subunit)	0 hour	Control = 4, Anesthesia = 5	Fig2.g	Band intensity	Control = 1.00, 0.12, Anesthesia = 1.17, 0.47	1) Normality test with Shapiro-Wilk test result: p-value=0.4609, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.04643, reject homoscedasticity assumption. 3) Welch's t-test, Bonferroni correction result: p-value=0.4820, 95% CI=(-0.7787, 0.4390), interpretation: there is no evidence to reject the null hypothesis
		3 hour	Control = 4, Anesthesia = 5			Control = 1.00, 0.26, Anesthesia = 1.56, 0.23	1) Normality test with Shapiro-Wilk test result: p-value=0.2093, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.8165, accept homoscedasticity assumption. 3) Independent t-test, Bonferroni correction result: p-value=0.0102, 95% CI=(-0.9452, -0.1805), interpretation: there is evidence to reject the null hypothesis
		6 hour	Control = 4, Anesthesia = 4			Control = 1.00, 0.22, Anesthesia = 1.70, 0.30	1) Normality test with Shapiro-Wilk test result: p-value=0.5222, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.6174, accept homoscedasticity assumption. 3) Independent t-test, Bonferroni correction result: p-value=0.0095, 95% CI=(-1.152, -0.2418), interpretation: there is evidence to reject the null hypothesis
		9 hour	Control = 3, Anesthesia = 4			Control = 1.00, 0.33, Anesthesia = 0.98, 0.46	1) Normality test with Shapiro-Wilk test result: p-value=0.8299, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.6019, reject homoscedasticity assumption. 3) Welch's t-test, Bonferroni correction result: p-value=0.9585, 95% CI=(-0.6748, 0.7055), interpretation: there is no evidence to reject the null hypothesis
Figure	**Assay Performed**	**Age (days) (Average, SD)**	**Number of mice**	**Figure**	**Parameter**	**Descriptive statistic (mean, SD)**	**Statistical Test and significance**

3	Open field test	Control = 81.69, 13.36, Anesthesia = 83.88, 14.96	Control = 16, Anesthesia = 16	Fig3. a	Total moved distance (m)	Control = 166.30, 42.00, Anesthesia = 171.10, 26.83	1) Normality test with Shapiro-Wilk test result: p-value=0.6565, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.09287, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.7064, 95% CI=(-20.70800, 30.18664), interpretation: there is no evidence to reject the null hypothesis
				Fig3. b	Time spent in center zone (sec)	Control = 506.90, 228.70, Anesthesia = 556.90, 263.00	1) Normality test with Shapiro-Wilk test result: p-value=0.814, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.5948, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.5704, 95% CI=(-127.9373, 227.9192), interpretation: there is no evidence to reject the null hypothesis
	Light dark box	Control = 76.69, 11.20, Anesthesia = 78.38, 12.684	Control = 16, Anesthesia = 16	Fig3. c	Ratio of time spent in light compartment	Control = 25.34, 12.78, Anesthesia = 24.20, 8.78	1) Normality test with Shapiro-Wilk test result: p-value=0.5387, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.1572, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.7704, 95% CI=(-0.090606, 0.067764), interpretation: there is no evidence to reject the null hypothesis
	Elevated plus maze	Control = 69.5, 0.8497, Anesthesia = 68.71, 0.9895	Control = 20, Anesthesia = 17	Fig3. d	Ratio of time spent in open arms	Control = 29.85, 9.41, Anesthesia = 29.42, 10.32	1) Normality test with Shapiro-Wilk test result: p-value=0.6939, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.7024, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.8958, 95% CI=(-7.0152, 6.1590), interpretation: there is no evidence to reject the null hypothesis
	3 chamber test	Control = 85.81, 11.48, Anesthesia = 88.06, 12.88	Control = 16, Anesthesia = 16	Fig3. f	Time spent in chamber (control)	Control = 184.50, 49.11, Anesthesia = 321.20, 54.56	1) Normality test with Shapiro-Wilk test result: p-value=0.9991, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.6884, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.00000002857, 95% CI=(99.18848, 174.18245), interpretation: there is evidence to reject the null hypothesis
					Time spent in chamber (anesthesia)	Control = 181.00, 64.27, Anesthesia = 321.70, 72.41	1) Normality test with Shapiro-Wilk test result: p-value=0.4588, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.65, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.000002473, 95% CI=(91.24991, 190.16826), interpretation: there is evidence to reject the null hypothesis
				Fig3. g	Preference Index	Control = 26.86, 19.89, Anesthesia = 27.69, 25.88	1) Normality test with Shapiro-Wilk test result: p-value=0.3435, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.3185, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.919, 95% CI=(-15.83003, 17.50446), interpretation: there is no evidence to reject the null hypothesis

	Novel object recognition test	Control = 81.00, 0.00, Anesthesia = 81.00, 0.00	Control = 20, Anesthesia = 17	Fig3. h	Preference Index	Control = 13.32, 41.33, Anesthesia = 22.06, 28.13	1) Normality test with Shapiro-Wilk test result: p-value=0.03076, reject normality assumption. 2) Non-parametric test(Kruskal-Wallis test) result: p-value= 0.4559, interpretation: there is no evidence to reject the null hypothesis
	Fear test	Control = 90.25 ± 10.44, Anesthesia = 100.6 ± 16.92	Control = 16, Anesthesia = 16	Fig3. g	Conditioning	Control = 23.27/3.64(SE), Anesthesia=23.08/3.64(SE)	1) Linear mixed effect modeling with a fixed effect for slope and group. Correlated random intercept and random slope term were incorporated to the model. Freezing duration was significantly increased during conditioning in control groups, 0.1923.2 S.E=3.6 (P-value=1.24e-08). The conditioning slope did not differ between the two groups (0.19, SE=5.14, p-value=0.970).
				Fig3. h	Total freezing time (Contextual fear)	Control = 57.24, 17.83, Anesthesia = 52.18, 17.02	1) Normality test with Shapiro-Wilk test result: p-value=0.0549, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.8599, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.4178, 95% CI=(-7.524919, 17.652419), interpretation: there is no evidence to reject the null hypothesis
				Fig3. i	Total freezing (Cue fear)	Control = 79.75, 15.89, Anesthesia = 78.01, 11.52	1) Normality test with Shapiro-Wilk test result: p-value=0.02314, reject normality assumption. 2) Non-parametric test(Kruskal-Wallis test) result: p-value= 0.5718, interpretation: there is no evidence to reject the null hypothesis
Figure	**Assay Performed**	**Time (post-anesthesia)**	**Number of mice**	**Figure**	**Phase**	**Descriptive statistic (mean, SD)**	**Statistical Test and significance**
		0 hour	Control = 5, Anesthesia = 5	Fig4. b	I	Control = 353, 81, Anesthesia = 250, 65	Baseline data analysis 1) Normality test with Shapiro-Wilk test result: p-value=0.2203, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.4327, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.0006, 95% CI=(48.32554, 158.60779), interpretation: there is evidence to reject the null hypothesis
					I → II	Control: 74, 28 (SE) Anesthesia: -88, 63 (SE)	Linear mixed effect modeling with a fixed effect for slope and group. Correlated random intercept and random slope term were incorporated to the model. Bonferroni correction was used. Result : Interaction is not significantly different (p-value=0.445) between the two groups. Thus, phase-dependent changes (slope) did not differ between the two groups.
					II → III	Control: -593, 56 (SE) Anesthesia: -328, 194 (SE)	Linear mixed effect modeling with a fixed effect for slope and group. Correlated random intercept and random slope term were incorporated to the model. Bonferroni correction was used. Result : Interaction is not significantly different (p-value=0.0187) between the two groups. Thus, phase-dependent changes (slope) did not differ between the two groups.

					III → IV	Control: 577, 76 (SE) Anesthesia: -96, 364 (SE)	Linear mixed effect modeling with a fixed effect for slope and group. Correlated random intercept and random slope term were incorporated to the model. Bonferroni correction was used. Result : Interaction is not significantly different (p-value=0.0187) between the two groups. Thus, phase-dependent changes (slope) did not differ between the two groups.
4	Oxygen consumption rates	3 hour	Control = 5, Anesthesia = 6	Fig4. d	I	Control = 613, 119, Anesthesia = 601, 116	Baseline data analysis 1) Normality test with Shapiro-Wilk test result: p-value=0.0882, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.9468, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.7642, 95% CI=(-71.52270, 96.41158), interpretation: there is no evidence to reject the null hypothesis
					I → II	Control: 420, 60 (SE) Anesthesia: 101, 129 (SE)	Linear mixed effect modeling with a fixed effect for slope. Correlated random intercept and random slope term were incorporated to the model. Bonferroni correction was used. Result : Interaction is significantly different (p-value=0.0120) between the two groups. Thus, phase-dependent changes (slope) are statistically different between the two groups.
					II → III	Control: -593, 56 (SE) Anesthesia: -328, 94 (SE)	Linear mixed effect modeling with a fixed effect for slope. Correlated random intercept and random slope term were incorporated to the model. Bonferroni correction was used. Result : Interaction is not significantly different (p-value=0.0298) between the two groups. Thus, phase-dependent changes (slope) did not differ between the two groups.
					III → IV	Control: 577, 76 (SE) Anesthesia: -96, 364 (SE)	Linear mixed effect modeling with a fixed effect for slope. Correlated random intercept and random slope term were incorporated to the model. Bonferroni correction was used. Result : Interaction is not significantly different (p-value=0.762) between the two groups. Thus, phase-dependent changes (slope) did not differ between the two groups.
		6 hour	Control = 6, Anesthesia = 6	Fig4. f	I	Control = 331, 73, Anesthesia = 364, 73	Baseline data analysis 1) Normality test with Shapiro-Wilk test result: p-value=0.5694, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.9846, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.1941, 95% CI=(-81.93264, 17.26597), interpretation: there is no evidence to reject the null hypothesis
					I → II	Control: 225, 34 (SE) Anesthesia: -14, 76(SE)	Linear mixed effect modeling with a fixed effect for slope. Bonferroni correction was used. Correlated random intercept and random slope term were incorporated to the model Result : Interaction is not significantly different (p-value=0.0358) between the two groups. Thus, phase-dependent changes (slope) did not differ between the two groups.
					II → III	Control: -304, 32 (SE) Anesthesia: 156, 117 (SE)	Linear mixed effect modeling with a fixed effect for slope. Bonferroni correction was used. Correlated random intercept and random slope term were incorporated to the model. Result : Interaction is not significantly different (p-value=0.1294) between the two groups. Thus, phase-dependent changes (slope) did not differ between the two two groups.

					III → IV	Control: 392, 38 (SE) Anesthesia: -200, 92 (SE)	Linear mixed effect modeling with a fixed effect for slope. Correlated random intercept and random slope term were incorporated to the model. Bonferroni correction was used. Result : Interaction is not significantly different (p-value=0.0341) between the two groups. Thus, phase-dependent changes (slope) did not differ between the two groups.
		9 hour	Control = 8, Anesthesia = 8	Fig4. h	I	Control = 286, 57, Anesthesia = 354, 97	Baseline data analysis 1) Normality test with Shapiro-Wilk test result: p-value=0.5704, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.0136, reject homoscedasticity assumption. 3) Welch's t-test result: p-value=0.0052, 95% CI=(-114.38684, -21.52983), interpretation: there is evidence to reject the null hypothesis
					I → II	Control: 65, 25 (SE) Anesthesia: 52, 57 (SE)	Linear mixed effect modeling with a fixed effect for slope. Correlated random intercept and random slope term were incorporated to the model. Bonferroni correction was used. Result : Interaction is not significantly different (p-value=0.311) between the two groups. Thus, phase-dependent changes (slope) did not differ between the two groups.
					II → III	Control: -218, 21 (SE) Anesthesia: 179, 77 (SE)	Linear mixed effect modeling with a fixed effect for slope. Correlated random intercept and random slope term were incorporated to the model. Bonferroni correction was used. Result : Interaction is significantly different (p-value=0.0086) between the two groups. Thus, phase-dependent differences (slope) are statistically different between the two groups.
					III → IV	Control: 185, 25 (SE) Anesthesia: -91, 128 (SE)	Linear mixed effect modeling with a fixed effect for slope. Correlated random intercept and random slope term were incorporated to the model. Bonferroni correction was used. Result : Interaction is not significantly different (p-value=0.0884) between the two groups. Thus, phase-dependent changes (slope) did not differ between the two groups.

Figure	**Assay Performed**	**Time (post-anesthesia)**	**Number of mice**	**Figure**	**Parameter**	**Descriptive statistic (mean, SD)**	**Statistical Test and significance**
4	Western blot, NDUFB8 (subunit of mitochondrial oxidative phosphorylation complex 1)	0 hour	Control = 4, Anesthesia = 5	Fig4.j	Band intensity	Control = 1.00, 0.17, Anesthesia = 0.46, 0.35	Baseline data analysis 1) Normality test with Shapiro-Wilk test result: p-value=0.7091, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.2541, accept homoscedasticity assumption. 3) Independent t-test, Bonferroni correction result: p-value=0.0268, 95% CI=(0.08299, 0.9991), interpretation: there is no evidence to reject the null hypothesis
		3 hour	Control = 4, Anesthesia = 5			Control = 1.00, 0.57, Anesthesia = 0.50, 0.10	Baseline data analysis 1) Normality test with Shapiro-Wilk test result: p-value=0.3833, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.03642, accept homoscedasticity assumption. 3) Welch's t-test, Bonferroni correction result: p-value=0.1785, 95% CI=(-0.4121, 1.419), interpretation: there is no evidence to reject the null hypothesis

	Western blot, NDUFB8 (subunit of mitochondrial oxidative phosphorylation complex 1)	6 hour	Control = 4, Anesthesia = 4			Control = 1.00, 0.50, Anesthesia = 1.58, 0.40	1) Normality test with Shapiro-Wilk test result: p-value=0.04116, reject normality assumption. 2) Nonparametric test(Kruskal-Wallis test), Bonferroni correction result: p-value=0.1489, interpretation: there is no evidence to reject the null hypothesis
		9 hour	Control = 4, Anesthesia = 4			Control = 1.00, 0.12, Anesthesia = 1.83, 0.53	Baseline data analysis 1) Normality test with Shapiro-Wilk test result: p-value=0.06118, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.485, accept homoscedasticity assumption. 3) Independent t-test, Bonferroni correction result: p-value=0.0225, 95% CI=(-1.490, -0.1634), interpretation: there is no evidence to reject the null hypothesis
Figure	**Assay Performed**	**Time (post-anesthesia)**	**Number of cells (mouse)**	**Figure**	**Parameter**	**Descriptive statistic (mean, SD)**	**Statistical Test and significance**
5	Female, miniature Excitatory synaaptic transmission (mEPSC)	6 hr	Control = 15(3) , Anesthesia = 17(3)	Fig5. b	Amplitude (pA)	Control = 15.34, 1.94, Anesthesia = 15.81, 1.61	1) Normality test with Shapiro-Wilk test result: p-value=0.867, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.4881, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.4524, 95% CI(-1.7581938 0.8032919), interpretation: there is no evidence to reject the null hypothesis
					Frequency (Hz)	Control = 8.59, 4.31, Anesthesia = 9.16, 3.65	1) Normality test with Shapiro-Wilk test result: p-value=0.4787, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.525, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.6919, 95% CI(-3.437479 2.311047), interpretation: there is no evidence to reject the null hypothesis
	Female, miniature Inhibitory synaaptic transmission (mIPSC)	6 hr	Control = 10(3) , Anesthesia = 12(3)	Fig5. f	Amplitude (pA)	Control = 50.97, 6.22, Anesthesia = 56.71, 11.42	1) Normality test with Shapiro-Wilk test result: p-value=0.3558, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.07539, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.1709, 95% CI(-14.177473 2.691646), interpretation: there is no evidence to reject the null hypothesis
					Frequency (Hz)	Control = 1.81, 1.11, Anesthesia = 3.56, 1.74	1) Normality test with Shapiro-Wilk test result: p-value=0.6547, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.1749, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.01262, 95% CI(-3.078435 -0.417121), interpretation: there is evidence to reject the null hypothesis

	Female, Western blot, cortex	6 hour	Control = 4, Anesthesia = 5	Fig5. d	PSD95	Control = 1.00, 0.22, Anesthesia = 1.93, 0.38	1) Normality test with Shapiro-Wilk test result: p-value=0.07165, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.3866, accept homoscedasticity assumption. 3) Independent t-test result: p-value= 0.003566, 95% CI(0.4170949 1.4361717), interpretation: there is evidence to reject the null hypothesis
					GluA1	Control = 1.00, 0.19, Anesthesia = 1.78, 0.57	1) Normality test with Shapiro-Wilk test result: p-value=0.4742, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.09392, accept homoscedasticity assumption. 3) Independent t-test result: p-value= 0.03506, 95% CI(0.07233691 1.48294805), interpretation: there is evidence to reject the null hypothesis
					GluA2	Control = 1.00, 0.23, Anesthesia = 1.94, 0.59	1) Normality test with Shapiro-Wilk test result: p-value=0.07165, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.1404, accept homoscedasticity assumption. 3) Independent t-test result: p-value= 0.02065, 95% CI(0.1920329 1.6787822), interpretation: there is evidence to reject the null hypothesis
Figure	**Assay Performed**	**Age (days) (Average, SD)**	**Number of mice**	**Figure**	**Parameter**	**Descriptive statistic (mean, SD)**	**Statistical Test and significance**
5	Female, Open field test	Control = 55.6, 3.0597, Anesthesia = 55.24, 6.5970	Control = 15, Anesthesia = 17	Fig5. g	Total moved distance (m)	Control = 176.12, 25.77, Anesthesia = 177.12, 28.35	1) Normality test with Shapiro-Wilk test result: p-value=0.9108, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.718, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.9178, 95% CI(-1865.880 2066.393), interpretation: there is no evidence to reject the null hypothesis
				Fig5. h	Time spent in center (sec)	Control = 391.50, 174.60, Anesthesia = 366.70, 218.10	1) Normality test with Shapiro-Wilk test result: p-value=0.02514, reject normality assumption. 2) Non-parametric test(Kruskal-Wallis test) result: p-value= 0.4114, interpretation: there is no evidence to reject the null hypothesis
	Female, 3 chamber test	Control = 57.40, 2.01, Anesthesia = 57.65, 5.8960	Control = 15, Anesthesia = 17	Fig5. i	Preference Index	Control = 0.26, 0.22, Anesthesia = 0.17, 0.27	1) Normality test with Shapiro-Wilk test result: p-value=0.5583, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.4097, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.3085, 95% CI(-0.27315931 0.08930939), interpretation: there is no evidence to reject the null hypothesis
				Fig5. j	Conditioning	Control = 6.04/2.27(SE), Anesthesia=7.00/2.13(SE)	1) Linear mixed effect modeling with a fixed effect for slope and group. Correlated random intercept and random slope term were incorporated to the model. Freezing duration was significantly increased during conditioning in control groups, 6.04 S.E=2.27 (P-value=0.009). The conditioning slope did not differ between the two groups (0.96, SE=3.12, p-value=0.758).

	Female, Fear test	Control = 61.4, 2.028, Anesthesia = 64.71, 7.060	Control = 15, Anesthesia = 17	Fig5. k	Total freezing time (Contextual fear)	Control = 49.94, 21.05, Anesthesia = 49.92, 15.75	1) Normality test with Shapiro-Wilk test result: p-value=0.3475, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.2707, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.9972, 95% CI(-13.30189 13.34754), interpretation: there is no evidence to reject the null hypothesis
				Fig5. l	Total freezing (Cue fear)	Control = 75.35, 19.71, Anesthesia = 68.95, 26.35	1) Normality test with Shapiro-Wilk test result: p-value=0.003967, reject normality assumption. 2) Non-parametric test(Kruskal-Wallis test) result: p-value= 0.571, interpretation: there is no evidence to reject the null hypothesis

Table	**Assay Performed**	**Number of mice**	**Parameter**	**Descriptive statistic (mean, SD)**	**Statistical Test and significance**
1	Arterial blood gas analysis (ABGA)	Control = 7, Anesthesia = 5	pH	Control = 7.39, 0.03, Anesthesia = 7.24, 0.02	1) Normality test with Shapiro-Wilk test result: p-value=0.9102, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.4374, accept homoscedasticity assumption. 3) independent t-test result: p-value=0.0000009684, 95% CI=(-0.1758170, -0.1145258), interpretation: there is evidence to reject the null hypothesis, difference in mean pH
			pCO_2 (mmHg)	Control = 46.3, 4.0, Anesthesia = 67.2, 3.2	1) Normality test with Shapiro-Wilk test result: p-value=0.7607, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.633, accept homoscedasticity assumption. 3) independent t-test result: p-value=0.00000175, 95% CI=(16.27968, 25.57747), interpretation: there is evidence to reject the null hypothesis, difference in mean pCO_2
			pO_2 (mmHg)	Control = 83, 21, Anesthesia = 122, 13	1) Normality test with Shapiro-Wilk test result: p-value=0.1031, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.633, accept homoscedasticity assumption. 3) independent t-test result: p-value=0.002929, 95% CI=(16.92526 61.81760), interpretation: there is evidence to reject the null hypothesis, difference in mean pO_2
			SaO_2 (%)	Control = 95, 3, Anesthesia = 98, 1	1) Normality test with Shapiro-Wilk test result: p-value=0.7598, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.03688, reject homoscedasticity assumption. 3) Whelch's t-test result: p-value=0.02722, 95% CI=(0.432538 5.453176), interpretation: there is evidence to reject the null hypothesis, difference in mean SaO_2

					HCO_3 (mmol/L)	Control = 27.5, 1.0, Anesthesia = 28.6, 0.1	1) Normality test with Shapiro-Wilk test result: p-value=0.1883, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.001835, reject homoscedasticity assumption. 3) Whelch's t-test result: p-value=0.02495, 95% CI=(0.432538 5.453176), interpretation: there is evidence to reject the null hypothesis, difference in mean HCO_3
					Base Excess (mmol/L)	Control =2, 1, Anesthesia = 1, 0	1) Normality test with Shapiro-Wilk test result: p-value=0.06399, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.2671, accept homoscedasticity assumption. 3) independent t-test result: p-value=0.006766, 95% CI=(-2.0306404, -0.4265025), interpretation: there is evidence to reject the null hypothesis, difference in mean Base Excess
Figure	**Assay Performed**	**Time (post-anesthesia)**	**Number of mic**	**Figure**	**Parameter**	**Descriptive statistic (mean, SD)**	**Statistical Test and significance**
Suppl 1	Male, Western blot, thalamus	6 hour	Control = 4, Anesthesia = 4	Suppl Fig1. b	PSD95	Control = 1.00, 0.88, Anesthesia = 3.04, 0.25	1) Normality test with Shapiro-Wilk test result: p-value=0.9137, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.0654, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.01537, 95% CI=(0.688408, 3.384268), interpretation: there is evidence to reject the null hypothesis
					GluA1	Control = 1.00, 0.79, Anesthesia = 0.78, 0.36	1) Normality test with Shapiro-Wilk test result: p-value=0.03318, reject normality assumption. 2) Nonparametric test(Kruskal-Wallis test) result: p-value=0.5637, interpretation: there is no evidence to reject the null hypothesis
					GluA2	Control = 1.00, 0.52, Anesthesia = 1.08, 0.13	1) Normality test with Shapiro-Wilk test result: p-value=0.2276, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.0479, reject homoscedasticity assumption. 3) Whelch's t-test result: p-value=0.793, 95% CI=(-0.7297907 0.8827276), interpretation: there is no evidence to reject the null hypothesis
	Female, Western blot, thalamus	6 hour	Control = 4, Anesthesia = 5	Suppl Fig1. d	PSD95	Control = 1.00, 0.51, Anesthesia = 2.37, 0.82	1) Normality test with Shapiro-Wilk test result: p-value=0.2, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.4344, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.01942, 95% CI=(0.2991905, 2.4301431), interpretation: there is evidence to reject the null hypothesis
					GluA1	Control = 1.00, 0.07, Anesthesia = 1.53, 0.51	1) Normality test with Shapiro-Wilk test result: p-value=0.6413, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.006739, reject homoscedasticity assumption. 3) Whelch's t-test result: p-value=0.08403, 95% CI=(-0.1101122, 1.1614464), interpretation: there is no evidence to reject the null hypothesis

					GluA2	Control = 1.00, 0.20, Anesthesia = 1.07, 0.25	1) Normality test with Shapiro-Wilk test result: p-value=0.2352, accept normality assumption. 2) Homoscedasticity test with Bartlett test result: p-value=0.6644, accept homoscedasticity assumption. 3) Independent t-test result: p-value=0.6601, 95% CI=(-0.2842567, 0.4212016), interpretation: there is evidence to reject the null hypothesis