Table 4 Effects of methamphetamine administration on weight loss in ED-METH group on day 1-14

Group	Weight loss (grams/day)						
	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Control	6.9 ± 2.01	13.5 ± 2.37	19.7 ± 1.91	26.9 ± 1.72	37.3 ± 2.22	40.3 ± 2.92	48.5 ± 2.92
ED-METH	7.6 ± 1.39	12.3 ± 1.25	$13.6 \pm 0.73^{**}$	$21.3 \pm 1.19^{*}$	$28.2 \pm 1.58^{**}$	35.5 ± 1.86	$37.1 \pm 1.99^{**}$
Group	Weight loss (grams/day)						
	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14
Control	55.5 ± 2.57	64.7 ± 2.48	68.1 ± 2.46	72.8 ± 6.86	83.3 ± 2.59	87.5 ± 2.58	92.7 ± 2.84
ED-METH	$43.0 \pm 2.45^{**}$	$47.0 \pm 2.68^{***}$	$50.9 \pm 2.96^{***}$	$39.7 \pm 4.62^{**}$	$57.9 \pm 3.78^{***}$	$58.7 \pm 3.57^{***}$	$60.5 \pm 3.52^{***}$

Note: Animals were treated with saline or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14. Data were presented as Mean ± SEM. ED-METH group (n = 8) and control group (n = 13).

$^{*}p < 0.05$ in comparison with control group by t-test

$^{**}p < 0.01$ in comparison with control group by t-test

$^{***}p < 0.001$ in comparison with control group by t-test

Table 5 Effects of escalating and binge doses-METH administration on weight loss in all experimental groups on day 15

Group	Weight loss on day 15 (grams/day)
Control	101.14 ± 3.27
ED-METH binge	56.87 ± 5.89***
ED-METH	65.95 ± 3.94***
AB-METH	89.76 ± 3.81

Note: Animals were treated with saline (control) or saline on day 1-14 and 4x6.0 mg/kg METH at 2 h intervals on day 15 (AB-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and saline on day 15 (ED-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and four consecutive injections of 6.0 mg/kg METH at 2 h intervals on day 15 (ED-METH binge). Data were presented as Mean ± SEM. ED-METH binge; escalating dose-methamphetamine binge group (n = 4), ED-METH; escalating dose-methamphetamine group (n = 4), AB-METH; acute dose-methamphetamine binge group (n = 5) and control group (n = 8)

***$p < 0.001$ in comparison with control group by ANOVA post hoc Dunnett test

Table 6 Effects of methamphetamine administration on amount of food intake on day 0-15

Group	Amount of food intake of each day (grams/day)							
	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Control	27.1 ± 0.690	23.4 ± 0.798	24.7 ± 0.594	29.3 ± 0.945	30.2 ± 0.563	25.9 ± 0.660	23.9 ± 0.83	22.0 ± 0.46
ED-METH	27.0 ± 0.912	22.3 ± 0.765	22.9 ± 0.785	27.4 ± 1.183	26.1 ± 0.712***	25.5 ± 0.69	19.8 ± 1.04**	20.2 ± 1.11

	Amount of food intake of each day (grams/day)							
	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14	Day 15
Control	22.4 ± 0.58	20.9 ± 0.63	21.0 ± 0.55	20.4 ± 0.65	21.9 ± 1.21	21.7 ± 0.54	21.1 ± 0.53	21.2 ± 0.70
ED-METH	17.6 ± 0.67***	17.5 ± 0.64**	18.4 ± 0.90*	16.3 ± 0.65***	15.7 ± 0.83**	17.8 ± 0.92**	15.1 ± 0.82***	16.4 ± 0.70***

Note: Animals were treated with saline or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg
METH on day 14. Data were presented as Mean $\pm$ SEM. ED-METH group (n = 8) and control group (n = 13).

*$p < 0.05$ in comparison with control group by t-test

**$p < 0.01$ in comparison with control group by t-test

***$p < 0.001$ in comparison with control group by t-test

Table 7 Effects of METH administration on amount of food intake in each group on day 15 (before binge doses-METH) and day 16 (after binge doses-METH)

	Group	Number of group	Food intake (grams/day)
Day 15	Control	13	21.2 ± 0.70***
	ED-effect	8	16.4 ± 0.70***
Day 16	Control	12	21.1 ± 0.64***
	Binge-effect	9	10.8 ± 1.18***

Note: Animals were treated with saline (control) or saline on day 1-14 and 4x6.0 mg/kg METH at 2 h intervals on day 15 (AB-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and saline on day 15 (ED-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and four consecutive injections of 6.0 mg/kg METH at 2 h intervals on day 15 (ED-METH binge). Data were presented as Mean ± SEM. ED-METH binge; escalating dose-methamphetamine binge group (n = 4), ED-METH; escalating dose-methamphetamine group (n = 4), AB-METH; acute dose-methamphetamine binge group (n = 5) and control group (n = 8)

*** $p < 0.001$ in comparison with control group by t-test

Table 8 Effects of METH administration on core body temperature in all experimental groups on day 15

Group	Core body temperature on day 15 (°C)
Control	36.2 ± 0.19
ED-METH binge	37.0 ± 0.27
ED-METH	36.7 ± 0.22
AB-METH	$37.7 \pm 0.58^{**}$

Note: Animals were treated with saline (control) or saline on day 1-14 and 4x6.0 mg/kg METH at 2 h intervals on day 15 (AB-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and saline on day 15 (ED-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and four consecutive injections of 6.0 mg/kg METH at 2 h intervals on day 15 (ED-METH binge). Data were presented as Mean ± SEM. ED-METH binge; escalating dose-methamphetamine binge group (n = 4), ED-METH; escalating dose-methamphetamine group (n = 4), AB-METH; acute dose-methamphetamine binge group (n = 5) and control group (n = 8)

$^{**}p < 0.01$ in comparison with control group by ANOVA post hoc Dunnette test

Table 9 Effects of METH administration on locomotor activity in control and ED-METH groups on day 0-14

Group	Locomotor activity (squares crossed)							
	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Control	90 ± 6.64	86 ± 13.35	90 ± 12.90	75 ± 13.03	73 ± 8.12	84 ± 14.71	56 ± 21.81	73 ± 16.83
ED-METH	70 ± 9.89	113 ± 14.70	$135 \pm 11.70^{*}$	$141 \pm 12.50^{**}$	$122 \pm 8.34^{**}$	$142 \pm 12.26^{**}$	$150 \pm 9.20^{***}$	$193 \pm 6.94^{***}$

Group	Locomotor activity (squares crossed)						
	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14
Control	80 ± 13.27	75 ± 25.22	67 ± 10.88	56 ± 16.70	56 ± 20.20	77 ± 19.06	56 ± 16.93
ED-METH	$183 \pm 8.67^{***}$	$208 \pm 7.40^{***}$	$178 \pm 7.06^{***}$	$187 \pm 7.15^{***}$	$171 \pm 6.11^{***}$	$165 \pm 6.99^{***}$	$120 \pm 7.25^{**}$

Note: Animals were treated with saline or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14. Data were presented as Mean $\pm$ SEM. ED-METH group (n = 8) and control group (n = 13).

$^{*}p < 0.05$ in comparison with control group by t-test

$^{**}p < 0.01$ in comparison with control group by t-test

$^{***}p < 0.001$ in comparison with control group by t-test

Table 10 Effects of escalating doses-METH binge administration on locomotor activity on day 15

Group	Squares crossed on day 15
Control	83.8 ± 14.10
ED-METH binge	127.0 ± 33.95
ED-METH	70.8 ± 20.58
AB-METH	2.2 ± 1.50[**]

Note: Animals were treated with saline (control) or saline on day 1-14 and 4x6.0 mg/kg METH at 2 h intervals on day 15 (AB-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and saline on day 15 (ED-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and four consecutive injections of 6.0 mg/kg METH at 2 h intervals on day 15 (ED-METH binge). Data were presented as Mean ± SEM. ED-METH binge; escalating dose-methamphetamine binge group (n = 4), ED-METH; escalating dose-methamphetamine group (n = 4), AB-METH; acute dose-methamphetamine binge group (n = 5) and control group (n = 8)

[**]$p < 0.01$ in comparison with saline-treated group by ANOVA post hoc Dunnett test

Table 11 Expression of PCNA-IR in subgranular zone after escalating and binge doses-METH administration

Group	PCNA-IR cells in subgranular zone (% of control)
Control	100.00 ± 1.16
ED-METH binge	$57.92 \pm 0.57^{*}$
ED-METH	$61.87 \pm 1.35^{*}$
AB-METH	76.03 ± 2.26

Note: Animals were treated with saline (control) or saline on day 1-14 and 4x6.0 mg/kg METH at 2 h intervals on day 15 (AB-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and saline on day 15 (ED-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and four consecutive injections of 6.0 mg/kg METH at 2 h intervals on day 15 (ED-METH binge). At 24 h after the last injection, rats were sacrificed and brains were removed. The tissues sections were specific detected with mouse anti-PCNA and the immunodetected sections were investigated under a light microscope at 20x magnification. Data were presented as Mean ± SEM. ED-METH binge; escalating dose-methamphetamine binge group (n = 4), ED-METH; escalating dose-methamphetamine group (n = 4), AB-METH; acute dose-methamphetamine binge group (n = 5) and control group (n = 8)

$^{*}p < 0.05$ in comparison with control group by ANOVA post hoc Dunnett test.

Table 12 Expression of PCNA-IR in subventricular zone after escalating and binge doses-METH administration

Group	PCNA-IR cells in subventricular zone (% of control)
Control	100.00 ± 1.36
ED-METH binge	$69.78 \pm 0.29^{***}$
ED-METH	$74.05 \pm 0.41^{***}$
AB-METH	$84.30 \pm 1.13^{**}$

Note: Animals were treated with saline (control) or saline on day 1-14 and 4x6.0 mg/kg METH at 2 h intervals on day 15 (AB-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and saline on day 15 (ED-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and four consecutive injections of 6.0 mg/kg METH at 2 h intervals on day 15 (ED-METH binge). At 24 h after the last injection, rats were sacrificed and brains were removed. The tissues sections were specific detected with mouse anti-PCNA and the immunodetected sections were investigated under a light microscope at 20x magnification. Data were presented as Mean ± SEM. ED-METH binge; escalating dose-methamphetamine binge group (n = 4), ED-METH; escalating dose-methamphetamine group (n = 4), AB-METH; acute dose-methamphetamine binge group (n = 5) and control group (n = 8)

$^{**}p < 0.01$ in comparison with control group by ANOVA post hoc Dunnett test.

$^{***}p < 0.001$ in comparison with control group by ANOVA post hoc Dunnett test.

Table 13 Expression of MAP2-IR in subgranular zone after escalating and binge doses-METH administration

Group	MAP2-IR cells in subgranular zone (% of control)
Control	100.00 ± 1.44
ED-METH binge	$29.64 \pm 0.73^{***}$
ED-METH	$32.91 \pm 1.28^{***}$
AB-METH	80.43 ± 1.99

Note: Animals were treated with saline (control) or saline on day 1-14 and 4x6.0 mg/kg METH at 2 h intervals on day 15 (AB-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and saline on day 15 (ED-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and four consecutive injections of 6.0 mg/kg METH at 2 h intervals on day 15 (ED-METH binge). At 24 h after the last injection, rats were sacrificed and brains were removed. The tissues sections were specific detected with mouse anti-MAP2 and the immunodetected sections were investigated under a light microscope at 20x magnification. Data were presented as Mean $\pm$ SEM. ED-METH binge; escalating dose-methamphetamine binge group (n = 4), ED-METH; escalating dose-methamphetamine group (n = 4), AB-METH; acute dose-methamphetamine binge group (n = 5) and control group (n = 8)

[***]$p < 0.001$ in comparison with control group by ANOVA post hoc Dunnett test.

Table 14 Expression of MAP2-IR in subventricular zone after escalating and binge doses-METH administration

Group	MAP2-IR cells in subventricular zone (% of control)
Control	100.00 ± 2.48
ED-METH binge	$67.67 \pm 2.99^{**}$
ED-METH	$70.20 \pm 0.76^{**}$
AB-METH	$78.88 \pm 1.29^{*}$

Note: Animals were treated with saline (control) or saline on day 1-14 and 4x6.0 mg/kg METH at 2 h intervals on day 15 (AB-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and saline on day 15 (ED-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and four consecutive injections of 6.0 mg/kg METH at 2 h intervals on day 15 (ED-METH binge). At 24 h after the last injection, rats were sacrificed and brains were removed. The tissues sections were specific detected with mouse anti-MAP2 and the immunodetected sections were investigated under a light microscope at 20x magnification. Data were presented as Mean $\pm$ SEM. ED-METH binge; escalating dose-methamphetamine binge group (n = 4), ED-METH; escalating dose-methamphetamine group (n = 4), AB-METH; acute dose-methamphetamine binge group (n = 5) and control group (n = 8)

$^{*}p < 0.05$ in comparison with control group by ANOVA post hoc Dunnett test.

$^{**}p < 0.01$ in comparison with control group by ANOVA post hoc Dunnett test.

Table 15 Expression of GFAP-IR cells in subgranular zone after escalating and binge doses-METH administration

Group	GFAP-IR cells in subgranular zone (% of control)
Control	100.00 ± 0.65
ED-METH binge	$179.98 \pm 1.18^{**}$
ED-METH	$150.58 \pm 2.81^{*}$
AB-METH	$176.72 \pm 2.44^{**}$

Note: Animals were treated with saline (control) or saline on day 1-14 and 4x6.0 mg/kg METH at 2 h intervals on day 15 (AB-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and saline on day 15 (ED-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and four consecutive injections of 6.0 mg/kg METH at 2 h intervals on day 15 (ED-METH binge). At 24 h after the last injection, rats were sacrificed and brains were removed. The tissues sections were specific detected with mouse anti-GFAP and the immunodetected sections were investigated under a light microscope at 20x magnification. Data were presented as Mean ± SEM. ED-METH binge; escalating dose-methamphetamine binge group (n = 4), ED-METH; escalating dose-methamphetamine group (n = 4), AB-METH; acute dose-methamphetamine binge group (n = 5) and control group (n = 8)

$^{*}p < 0.05$ in comparison with control group by t-test.

$^{**}p < 0.01$ in comparison with control group by ANOVA post hoc Dunnette test.

Table 16 Expression of GFAP-IR cells in subventricular zone after escalating and binge doses-METH administration

Group	GFAP-IR cells in subventricular zone (% of control)
Control	100.00 ± 2.28
ED-METH binge	$127.42 \pm 1.76^{*}$
ED-METH	113.78 ± 2.09
AB-METH	$146.90 \pm 1.80^{***}$

Note: Animals were treated with saline (control) or saline on day 1-14 and 4x6.0 mg/kg METH at 2 h intervals on day 15 (AB-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and saline on day 15 (ED-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and four consecutive injections of 6.0 mg/kg METH at 2 h intervals on day 15 (ED-METH binge). At 24 h after the last injection, rats were sacrificed and brains were removed. The tissues sections were specific detected with mouse anti-GFAP and the immunodetected sections were investigated under a light microscope at 20x magnification. Data were presented as Mean ± SEM. ED-METH binge; escalating dose-methamphetamine binge group (n = 4), ED-METH; escalating dose-methamphetamine group (n = 4), AB-METH; acute dose-methamphetamine binge group (n = 5) and control group (n = 8)

$^{*}p < 0.05$ in comparison with control group by ANOVA post hoc Dunnett test.

$^{***}p < 0.001$ in comparison with control group by ANOVA post hoc Dunnett test.

Table 17 Expression of MBP-IR in cingulate cortex after escalating and binge doses-METH administration

Group	Optical density of MBP-IR in cingulate cortex (% of control)
Control	100.00 ± 17.33
ED-METH binge	$56.60 \pm 4.08^{*}$
ED-METH	66.80 ± 8.24
AB-METH	$58.16 \pm 7.40^{*}$

Note: Animals were treated with saline (control) or saline on day 1-14 and 4x6.0 mg/kg METH at 2 h intervals on day 15 (AB-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and saline on day 15 (ED-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and four consecutive injections of 6.0 mg/kg METH at 2 h intervals on day 15 (ED-METH binge). At 24 h after the last injection, rats were sacrificed and brains were removed. The tissues sections were specific detected with mouse anti-MBP and the immunodetected sections were investigated under a light microscope at 20x magnification. Data were presented as Mean $\pm$ SEM. ED-METH binge; escalating dose-methamphetamine binge group (n = 4), ED-METH; escalating dose-methamphetamine group (n = 4), AB-METH; acute dose-methamphetamine binge group (n = 5) and control group (n = 8)

$^{*}p < 0.05$ in comparison with control group by ANOVA post hoc Dunnett test.

Table 18 Expression of MBP-IR in white matter after escalating and binge doses-METH administration

Group	Optical density of MBP-IR in white matter (% of control)
Control	100 ± 7.96
ED-METH binge	111.92 ± 3.79
ED-METH	96.29 ± 9.75
AB-METH	118.52 ± 5.33

Note: Animals were treated with saline (control) or saline on day 1-14 and 4x6.0 mg/kg METH at 2 h intervals on day 15 (AB-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and saline on day 15 (ED-METH) or gradually increasing three doses of METH (0.1-3.9 mg/kg/day) on day 1-13 and 3x4.0 mg/kg METH on day 14 and four consecutive injections of 6.0 mg/kg METH at 2 h intervals on day 15 (ED-METH binge). At 24 h after the last injection, rats were sacrificed and brains were removed. The tissues sections were specific detected with mouse anti-MBP and the immunodetected sections were investigated under a light microscope at 20x magnification. Data were presented as Mean $\pm$ SEM. ED-METH binge; escalating dose-methamphetamine binge group (n = 4), ED-METH; escalating dose-methamphetamine group (n = 4), AB-METH; acute dose-methamphetamine binge group (n = 5) and control group (n = 8)

Table 19 Effects of escalating and binge doses-METH administration on day 0-14

	ED-METH treated group vs. control group														
	Day														
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Weight loss	x	0	0	−−	−	−−	0	−−	−−	−−−	−−−	−−	−−−	−−−	−−−
Food intake	0	0	0	0	−−−	0	−−	0	−−−	−−	−	−−−	−−	−−	−−−
Behavioral test	0	+++	+++	+++	+++	+++	+++	+++	+++	+++	+++	+++	+++	+++	+++
Locomotor activity	0	0	+	++	++	++	+++	+++	+++	+++	+++	+++	+++	+++	++

Note: 0, no effect; −, decrease; +, increase; x, no measure

Table 20 Effects of escalating and binge doses-METH administration on day 15 and day 16

Test	Group	Day 15	Day 16
	ED-METH binge	− − −	x
Weight loss	ED-METH	− − −	x
	AB-METH	0	x
	ED-METH binge	− −	− − −
Food intake	ED-METH	− −	0
	AB-METH	0	− − −
	ED-METH binge	0	x
Core body temperature	ED-METH	0	x
	AB-METH	++	x
	ED-METH binge	+++	x
Behavioral test	ED-METH	0	x
	AB-METH	+++	x
	ED-METH binge	0	x
Locomotor activity	ED-METH	0	x
	AB-METH	− −	x

Note: 0, no effect; −, decrease; +, increase; x, no measure

Table 21 Effects of escalating and binge doses-METH administration on hippocampal neurogenesis in subgranular and subventricular zones

Neurogenesis	Marker	Area	Group	Expression
Proliferative cell	Proliferating cell nuclear antigen (PCNA)	SGZ	ED-METH binge	−
			ED-METH	−
			AB-METH	0
		SVZ	ED-METH binge	− − −
			ED-METH	− − −
			AB-METH	− −
Mature neuron	Microtubule associated protein 2(MAP2)	SGZ	ED-METH binge	− − −
			ED-METH	− − −
			AB-METH	0
		SVZ	ED-METH binge	− −
			ED-METH	− −
			AB-METH	−
Astrocyte	Glial fibrillary acidic protein (GFAP)	SGZ	ED-METH binge	+ +
			ED-METH	+
			AB-METH	+ +
		SVZ	ED-METH binge	+
			ED-METH	0
			AB-METH	+ + +

Note: 0, no effect; −, decrease; +, increase; SGZ, subgranular zone; SVZ, subventricular zone

Table 21 Effects of escalating and binge doses-METH administration on hippocampal neurogenesis in subgranular and subventricular zones (CONT.)

Neurogenesis	Marker	Area	Group	Expression
Oligodendrocyte	Myelin basic protein (MBP)	Cingulate cortex	ED-METH binge	−
			ED-METH	0
			AB-METH	−
		White matter	ED-METH binge	0
			ED-METH	0
			AB-METH	0

Note: 0, no effect; −, decrease; +, increase; SGZ, subgranular zone; SVZ, subventricular zone