Supporting information:

Detection of biogenic amines in C57BL/6 mice brain by capillary electrophoresis electrokinetic supercharging

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Electrophoresis:

New capillaries were preconditioned by flushing with methanol for 10 min, 1.0 M NaOH for 30 min, 1.0 M HCl for 30 min and deionized water for 30 min. Between separations, the capillary was rinsed with deionized water for 1 min, running buffer for 3 min, respectively.

Animal and surgical procedures:

Adult transgenic mice, C57BL/6 aged 3 months and between 25 and 30 g were used for all experiments. Animals were randomly divided into three groups:

(1) pre-BCAL (Sham-operated group, n=4). Mice were anesthetized with an intraperitoneal injection of ketamine. After that mice neck skin were cut along the carotid arteries and bilateral common carotid arteries were separated by surgical suture but not occlusion.

(2) BCAL 30 min (Global cerebral ischemia-operated group, n=4). After that mice neck skin were cut along the carotid arteries and bilateral common carotid arteries occlusion by surgical suture for 30 min.

(3) reperfusion (Global cerebral ischemia-reperfusion, n=4). After the bilateral common carotid arteries were occluded by surgical suture for 30 min, loosen the surgical suture, and blood flow was restored for 3 h.

Figure S1. Effect of different leading electrolyte on the stacking. "*" unknown. Other conditions were the same as in Figure 1.

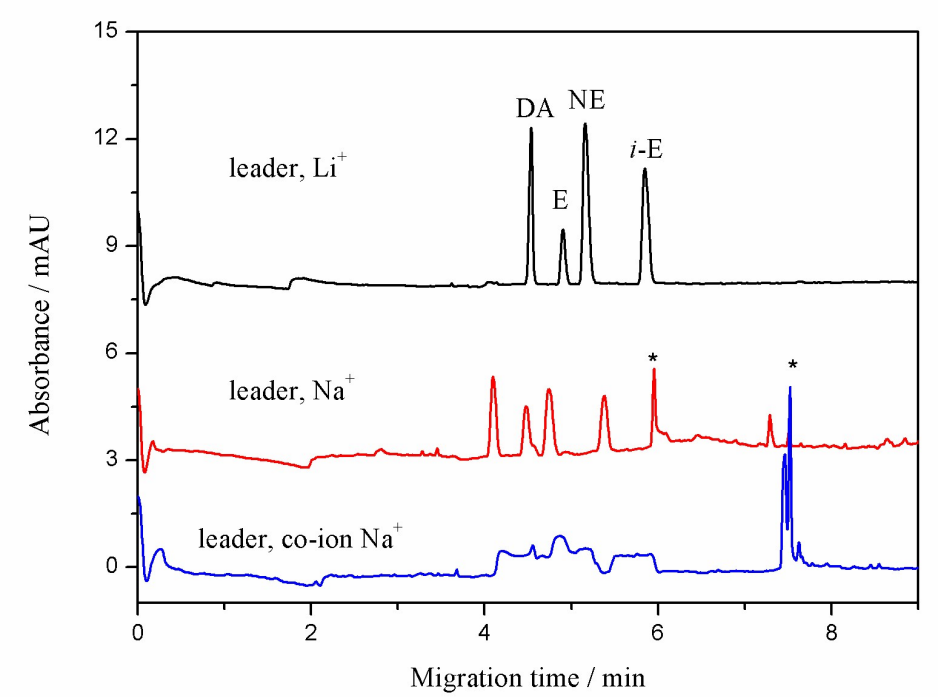

Figure S2. Effect of leading electrolyte injection time. Other conditions were the same as in Figure 1.

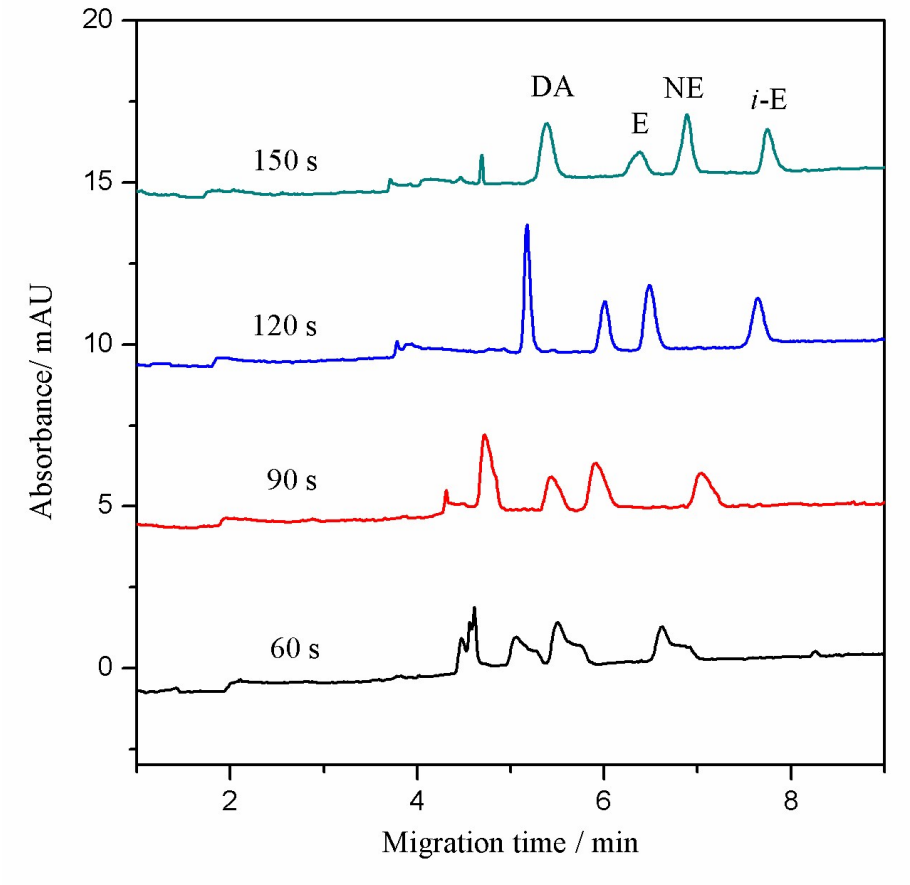

Figure S3 The effect of TFA concentration. Other conditions were the same as in Figure 1.

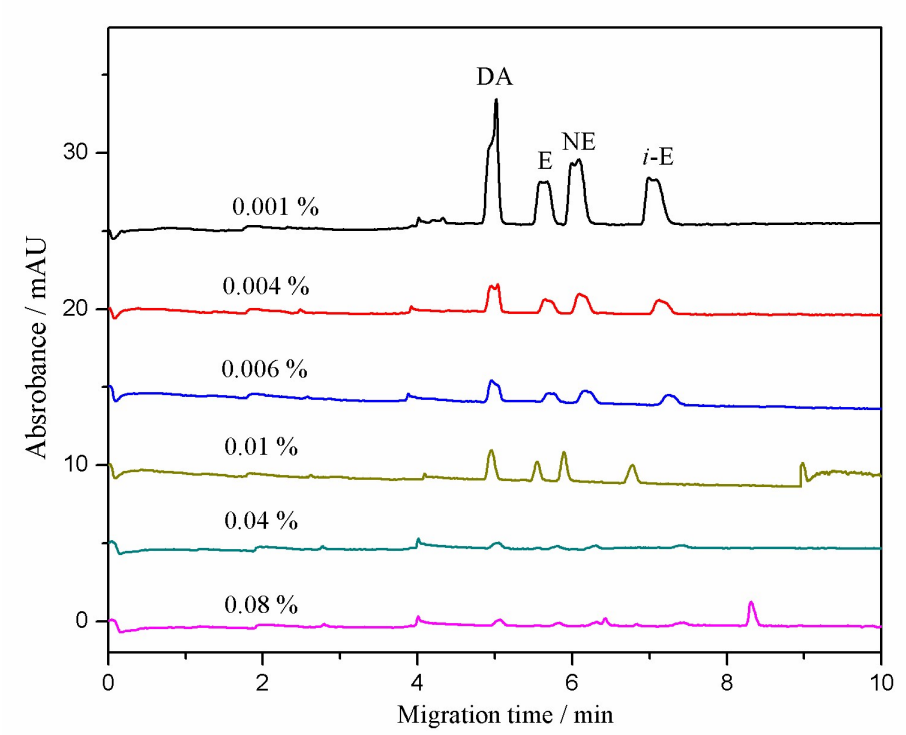

Figure S4. Effect of sample injection time. Other conditions were the same as in Figure 1.

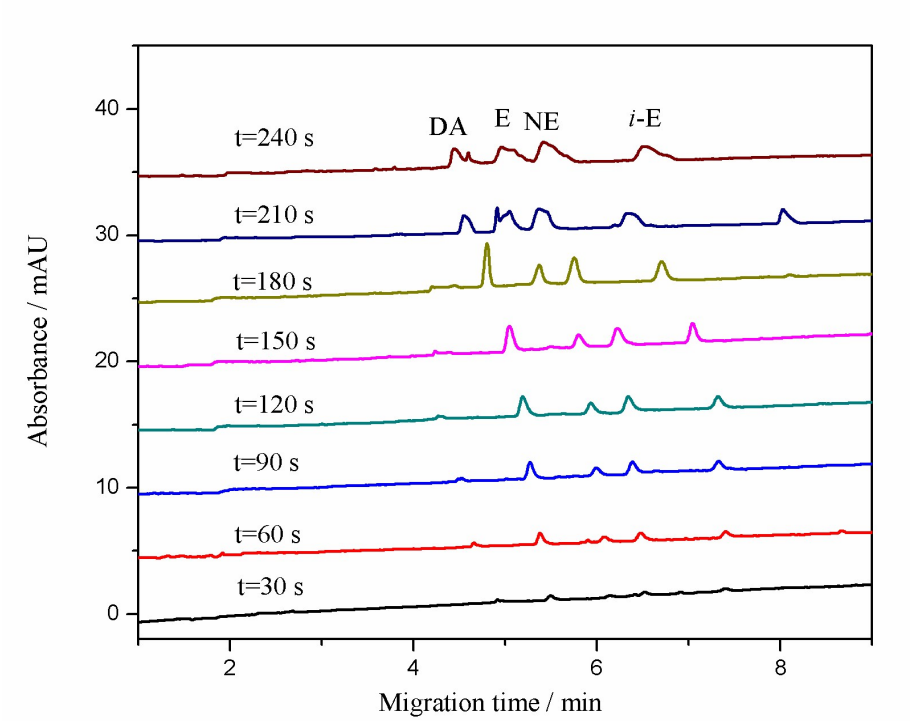

Figure S5. Effect of the buffer solution pH. Other conditions were the same as in Figure 1.

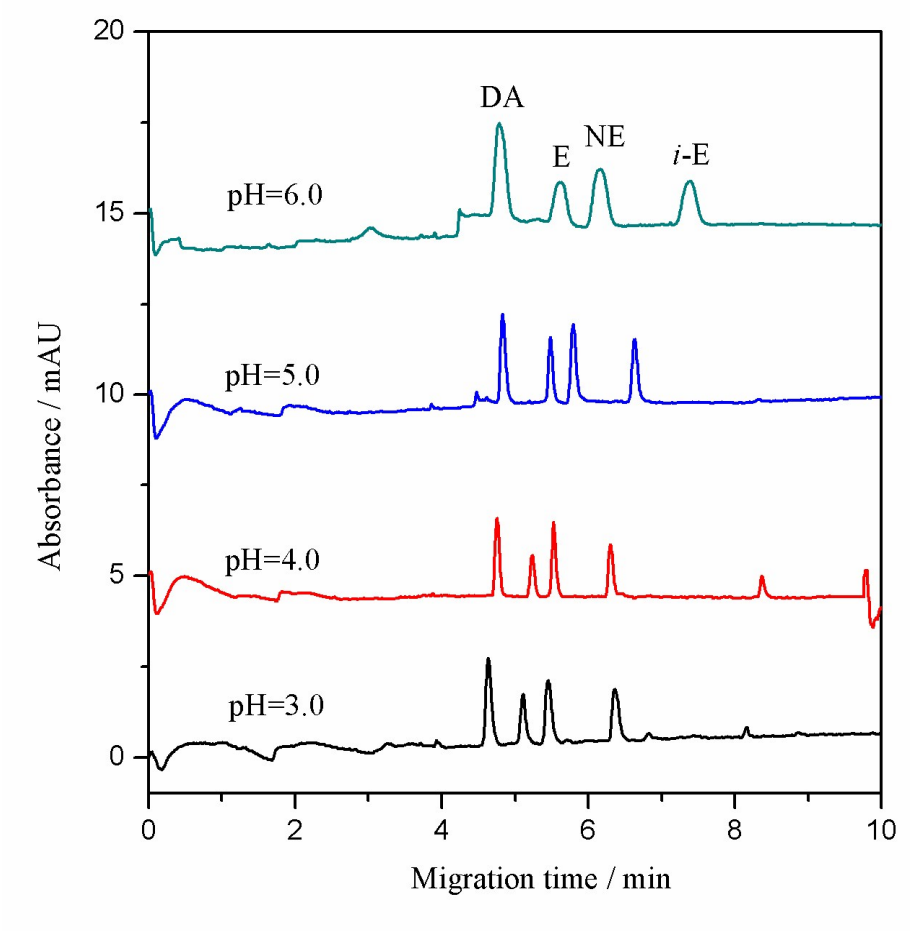

Table S1. Comparison of different acid on the detection of the four amines. [a]

Acids	Peak area (a.u.)			
	DA	E	NE	*i*-E
HNO_3	143	209	123	123
$HClO_4$	1710	855	325	158
TFA [b]	16782	9061	13525	11304

[a]: The concentration of the four analytes was 40 ng/mL. Other conditions were the same as Figure 2.

[b]: TFA, trifluoroacetic acid.

Table S2. Comparison of different methods for neurochemical amines detection.

Method[a]	Analysis time (min)	Sample	LOD	Reference
CE-CL	6.5	human urine	47-150 nmol/L	[18]
CE-LIF	12	plant sap, human plasma, urine	7-100 nmol/L	[22]
CE-UV	35	human urine	122-39.2 nmol/L	[23]
CE-ECD	12	-	0.8-1.0 μmol/L	[24]
CF-EKS	40	-	1.2-1.4 nmol/L	[26]
EKS/MEKC-PDAD	<10	mice brain	0.42-0.57 ng/mL (eq. 1.3-2.2 nmol/L)	This work

[a]: CL, chemical luminescence; LIF, laser-induced fluorescence; UV, Ultraviolet-Visible; ECD, electrochemical detection; CF-EKS, counter-flow electrokinetic supercharging; PDAD, photodiode array detector; "-" no application.