SUPPLEMENTARY MATERIAL

Measurement of levodopa concentration

Levodopa concentration was measured in blood plasma by high-performance liquid chromatography (UltiMate™ 3000 HPLC system; Thermo Scientific, Waltham, MA, USA). Briefly, plasma was obtained by centrifugation of blood collected in EDTA-2Na tubes (3,000 rpm, 10 min, 4°C). A 500 μL plasma sample was then mixed with 50 μL of 60% perchloric acid and centrifuged (14,000 rpm, 40 min, 4°C). The supernatant was further centrifuged in an ultrafree tube, and the new supernatant (25 μL) was injected into an HPLC system equipped with an Acclaim™ 120 C18 column (Φ4.6 × 150 mm), an ECD-3000RS detector, and a WPS-3000 TRS autosampler with a cooling device. The mobile phase buffer was prepared by adding 27.6 g sodium phosphate, 680 μL of 0.2 mg/mL nitrilotriacetic acid, and 100 μL tetrahydrofuran to 2 L distilled water and then mixing in 400 μL 5% SDS, 200 μL ProClin150, and 728 μL phosphoric acid. Levodopa was separated at a flow rate of 1.0 mL/min and column temperature of 31°C. Chromatographs were analyzed using Chromeleon 7.2. The limit of detection and limit of quantification were 2.1 pmol/mL and 7.0 pmol/mL, respectively.