
Supplementary Materials

The Protective Effect of (-)-Tetrahydroalstonine against OGD/R-Induced Neuronal Injury via Autophagy Regulation

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Identification of (–)-Tetrahydroalstonine

(–)-Tetrahydroalstonine: $[\alpha]_{\text{D}}^{25}$ -93.5 (c 0.90, CH₃OH); UV (CH₃OH) λ_{max} (log ϵ) 226 (3.92), 285 (0.76); IR (KBr) ν_{max} 3420, 1698, 2875, 1627, 1541, 1455 cm⁻¹; HR-ESI-MS at m/z 353.1789 [M+H]⁺ (calcd for C₂₁H₂₅N₂O₃, 353.1787); ¹H-NMR (CD₃OD, δ_{H} = 4.87 ppm, 600 MHz), δ_{H} : 7.55 (1H, s, H-17), 7.35 (1H, d, J = 7.8, H-9), 7.26 (1H, d, J = 7.8, H-12), 7.00 (1H, t, J = 7.8, H-11), 6.93 (1H, t, J = 7.8, H-10), 4.48 (1H, m, H-19), 3.73 (3H, s, COOCH₃), 3.32 (1H, m, H-3), 3.15 (1H, d, J = 12.5, H-21a), 3.00 (1H, m, H-5a), 2.92 (1H, m, H-6a), 2.74 (1H, m, H-15), 2.71-2.64 (3H, overlapped, H-21b, H-6b and H-14a), 2.51 (1H, m, H-5b), 1.69 (1H, m, H-20), 1.42 (1H, m, H-14b), 1.37 (3H, d, J = 6.2, H-18); ¹³C-NMR (CD₃OD, δ_{C} = 49.0 ppm, 150 MHz), δ_{C} : 169.6 (s, C-22), 156.9 (s, C-17), 138.1 (s, C-13), 135.6 (s, C-2), 128.3 (s, C-8), 121.8 (s, C-11), 119.7 (s, C-10), 118.5 (s, C-9), 112.0 (s, C-12), 110.9 (s, C-16), 108.0 (s, C-7), 73.6 (s, C-19), 61.8 (s, C-3), 57.1 (s, C-21), 54.8 (s, C-5), 51.7 (s, C-23), 39.9 (s, C-20), 34.8 (s, C-14), 32.7 (s, C-15), 22.5 (s, C-6), 18.9 (s, C-18). The parameters of the spectrograms are shown in the following figures.

Supplementary Figures

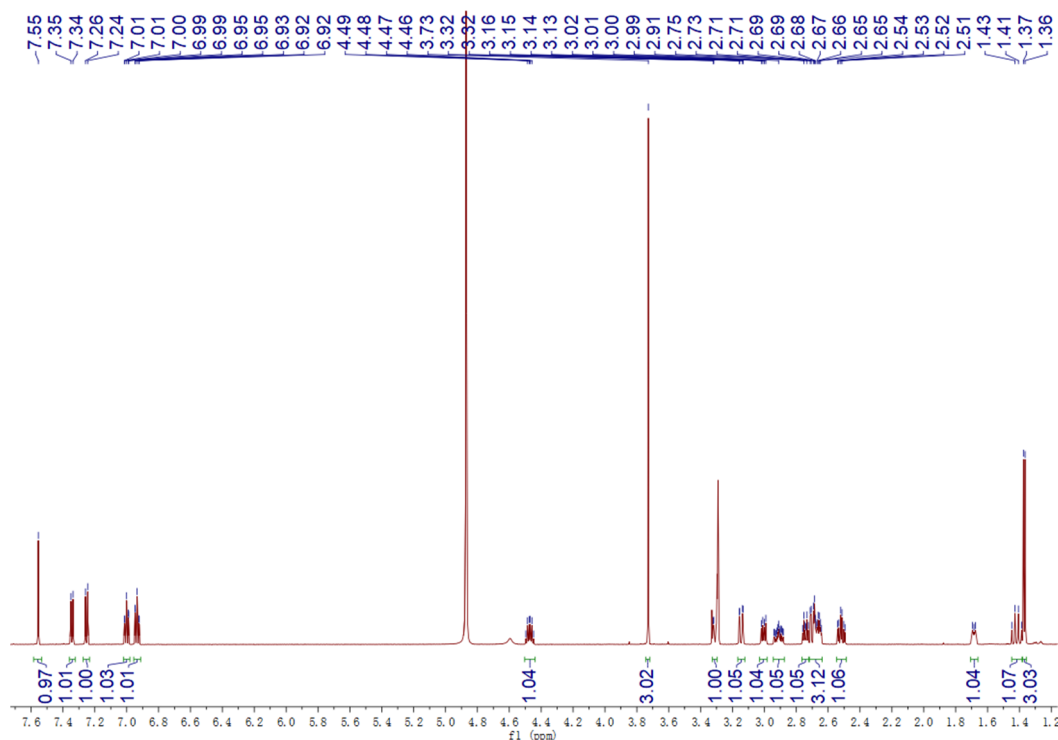


Figure S1. ¹H NMR spectrum of (–)-Tetrahydroalstonine (600 Hz, CD₃OD)

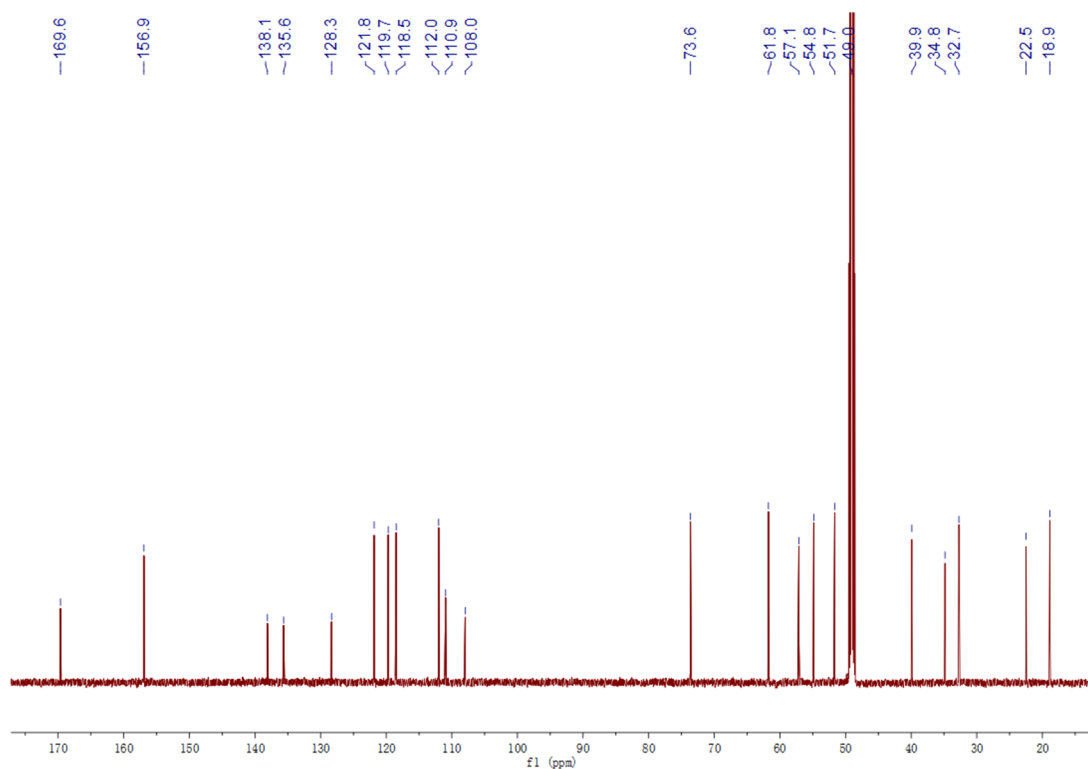


Figure S2. ¹³C NMR spectrum of (-)-Tetrahydroalstonine (150 Hz, CD₃OD)

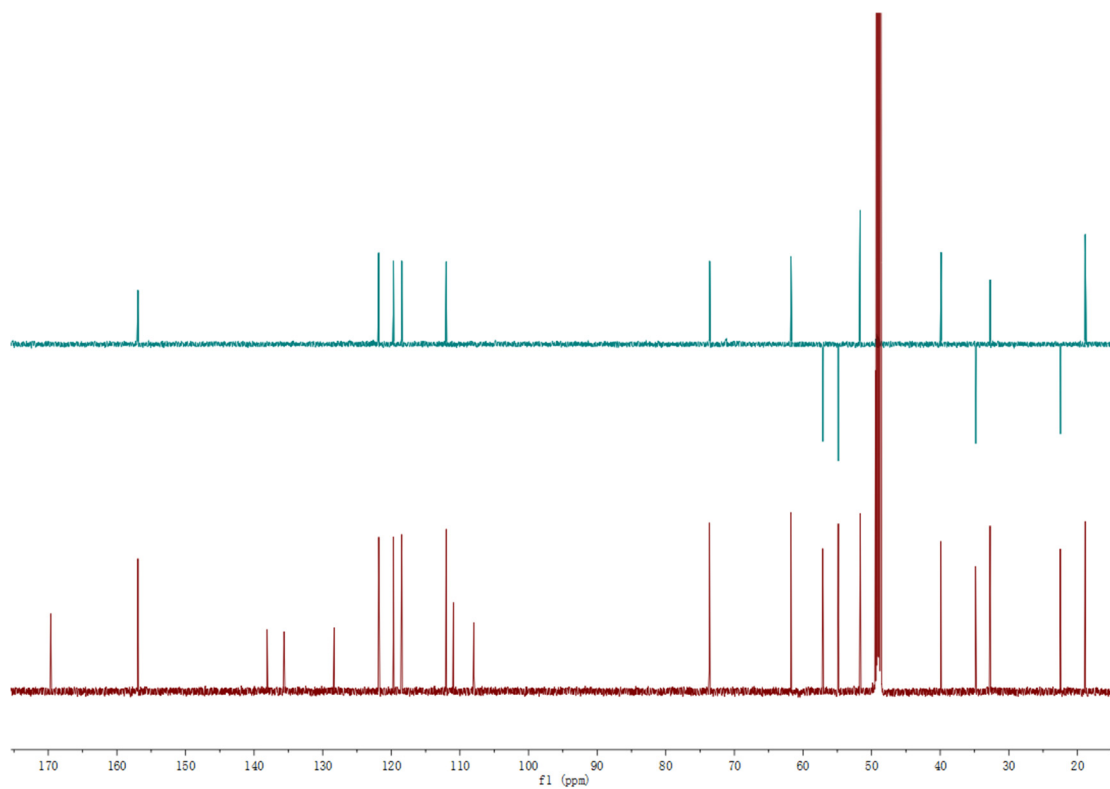


Figure S3. DEPT-135 spectrum of (-)-Tetrahydroalstonine (150 Hz, CD₃OD)