Electronic Supplementary Material (ESI) for Toxicology Research.

Supplementary Material

Fig. S1 Effects of JWH-030 and JWH-210 on ventricular systolic pressure (LVSP), left ventricular developed pressure (LVDP), and heart rate of isolated heart. LVSP, LVDP, and heart rate were measured after treatment with substances at indicated concentration in Langendorff-perfused Sprague-Dawley (SD) rat hearts. Data are means±standard error (SE, n=4). There were no significant differences between groups.

Fig. S2 JWH-030 prolonged QTcB but had no effects on RR interval. JWH-030 prolonged QTcB interval but had no effects on RR interval in SD rats compared to bsasal level. Open arrow indicates the drug injection time. Data are means±standard errror (SE, n=4-5). $^{*}p<0.05$ vs. -1 (1 minute before treatment). Two-way repeated measures analysis of variance (ANOVA, Bonferroni's test)

Fig. S3 Effect of E-4031 and JWH-030 on QT interval in rats. Upper figure shows representative QT interval plot patterns and changes of E-4031 (0.2 mg/kg, i.v.). Middle and lower figures show representative QT interval plot patterns and changes of JWH-030 and vehicle treatment. Red arrows indicate vehicle, JWH-030, and E-4031 treatment time.

Fig. S4 Effects of JWH-030 beating rate of mice primary cardiomyocytes (DIV 8). Beating rate was measured for 10 minutes after treatment with substances at indicated concentration. Data are means±standard error (SE, n=26).). $^{**}p<0.01$ vs. 0 (control). JWH-030 reduced beating rate at 100 μM. One-way analysis of variance (ANOVA, Bonferroni's test)

File. S5 Effects of JWH-030 beating rate of mice primary cardiomyocytes (DIV 8).

Fig. S6 Pearson correlation analysis of RR and QT intervals in SD rats. QTcB has no correlation with RR intervals (pearson coefficient 0.00765, p=0.357). QT recordings (14,491) from 16 rats were analyzed

Fig. S7 MRM chromatogram of standards and sample. (A) A representative chromatogram of standards and standard curve. The standards were prepared using pooled blank serum and spiking solution of JWH-030 at 50, 25, 12.5, 1.25, and 0.625 pg/mL. (B) A representative chromatogram of JWH-030 (0.5 mg/kg) administered sample.