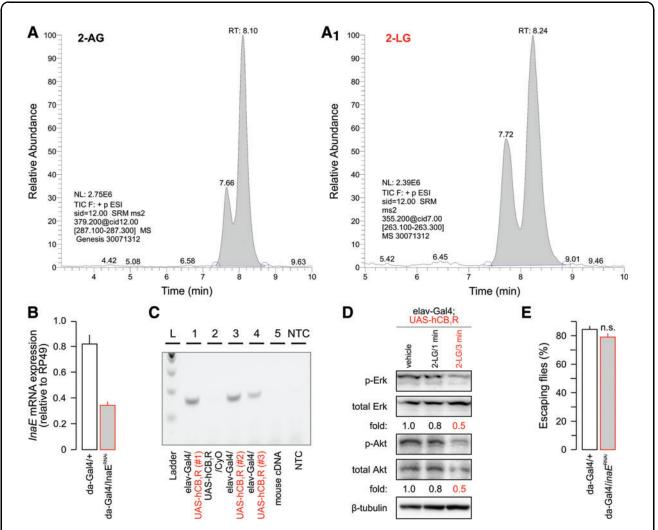
## **Supplementary Data**



**SUPPLEMENTARY FIG. S1.** 2-LG signaling in *Drosophila melanogaster*. (**A, A**<sub>1</sub>) Representative chromatogram for 2-AG and 2-LG isolated from third instar Oregon-RS larvae. (**B**) The efficacy of RNAi knockdown of *inaE* using a ubiquitous *daughterless*-Gal4 (*da*-Gal4) driver. (**C**) Human CB<sub>1</sub>R mRNA expression in three *Drosophila* strains after P element-mediated transgenesis. Neither balancer chromosomes alone nor mouse cDNA showed mRNA amplification. (**D**) 2-LG rapidly inhibits both extracellular signal-regulated protein kinase 1/2 (Erk1/2) and protein kinase B (Akt) phosphorylation in hCB<sub>1</sub>R-expressing adult fruit flies. (**E**) *inaE* knockdown does not affect locomotor behavior in adult *Drosophila*. 2-AG, 2-arachidonoylglycerol; 2-LG, 2-linoleoyl glycerol; n.s., nonsignificant; NTC, nontemplate control.