

**Figure S2.** RluA-1 expression in the adult brain of Drosophila melanogaster. **(A)**. RluA-1 gene expression pattern in adult brain expressing 40xUAS-mCD8::GFP under RluA-1<sup>GAL4</sup> driver. GFP positive signals labeled the optical lobe photoreceptor neurons and unidentified clusters of neurons in the brain. Scale bar =  $100\mu m$ . **(B)**. In RluA-1-GFSTF line, the GFP positive signals are detected in the cell bodies of neurons in optical lobes and unidentified neuron clusters in the adult brain, counter-stained with the presynaptic marker nc82 (anti-Bruchpilot) (B¹, GFP, green; B²: nc82, magenta; B³: merged). Scale bar =  $50\mu m$ .