



Supplemental Figure 2. Multi-electrode array (MEA) recording from the mouse retina and the classification of RGCs.

A. The picture shows a piece of retina ($\sim 2 \times 2 \text{ mm}^2$) mounted on the 8x8 electrode array. Each black dot represents a recording electrode. **B.** Raw traces of recorded spikes from a WT mouse retina at P14. Light-evoked spiking activities were readily detected by almost all the recording electrodes. The red line in the right bottom grid shows the onset of light stimulus, and other channels exhibited the corresponding spikes to the light stimulus. **C.** Typical classification of six types of RGCs in a WT retina. Each panel shows raster plots (top) from 30 repeats of a 10-sec recording on a single cell and the corresponding peristimulus time histogram (PSTH; bottom). The 2-sec light stimuli are indicated by pink boxes. RGCs were classified into ON sustained, ON transient, ON-OFF sustained, ON-OFF transient, OFF sustained and OFF transient subtypes.