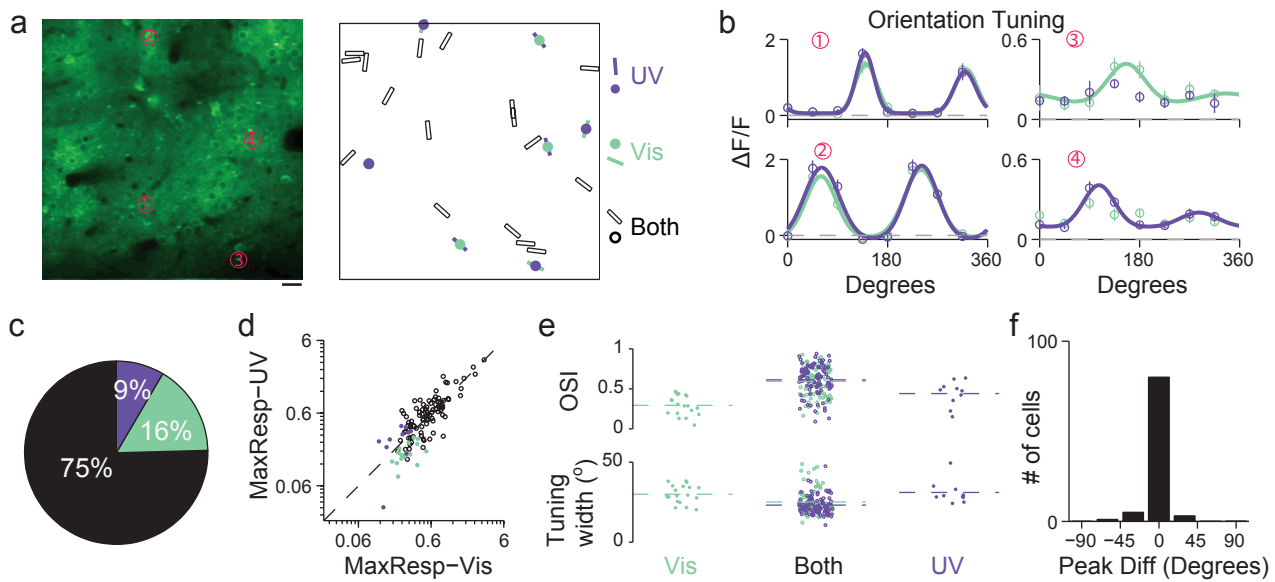


Neuronal Representation of Ultraviolet Visual Stimuli in Mouse Primary Visual Cortex

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Supplementary Figures 1



Supplementary Figure 1. Comparison of neuronal response in the primary visual cortex of *Gnat^{-/-}* mouse to UV and visible stimuli. (a), Left, example two-photon image of layer 2/3 neurons labeled with GCaMP6s. Scale bar: 20 μ m. Right, responses to visible and UV drifting gratings. Dots, neurons with significant responses to visual stimulation. Bars, neurons with significant orientation selectivity. Purple, UV-only responsive; green, visible-only responsive; black, responsive to both wavelengths. (b), Orientation tuning curves for four example neurons marked in a. Left, two neurons orientation-tuned for both visible and UV wavelengths. Right, two neurons exhibiting orientation selectivity to only visible and only UV drifting gratings, respectively. Open circles, mean; vertical lines, error bar, SEM.; curves, double Gaussian fits to mean data. Green: visible; purple: UV. (c), Pie chart showing the percentage of neurons classified as orientation selective to only visible stimulation (green), only UV stimulation (purple), or both (black) (118 neurons in 3 animals). (d), Scatter plot of the maximal response to UV versus that to visible gratings for neurons orientation-selective to only visible (green dot), only UV (purple dot), and both visible-and-UV (open black circle) gratings. (e), Scatter plots of orientation selectivity index and tuning width. Dashed lines indicate mean values. (f), Histogram distribution of difference in the preferred orientations of neurons that were orientation-selective to both UV and visible drifting-grating stimuli.