

Supplementary Information

Visual Adaptation to Convexity in Macaque Area V4

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Supplementary Figure Legends

Supplementary Figure 1. Response profile for single unit from Figure 2A. Responses over the entire trial for all adaptation and test conditions are shown. As in Figure 2, spike rasters are shown above with peristimulus time histograms below. Black vertical histogram bars designate the analysis window (80ms-280ms post test onset). The black horizontal bars indicate the time of the stimulus presentation.

Supplementary Figure 2. Response profile for single unit from Figure 2B. Figure specifications are identical with Supplementary Figure 1.

Supplementary Figure 3. Receptive field characteristics. (A) Receptive Field centers. Since we recorded in left ventral V4 in both monkeys, receptive fields were in the upper right visual quadrant. (B) Square root receptive field area vs. receptive field eccentricity. The values are highly similar to previously published RF data (Gattass et al., 1988) (C) Histogram of stimulus size divided by receptive field size. Stimuli were generally smaller than the receptive fields.

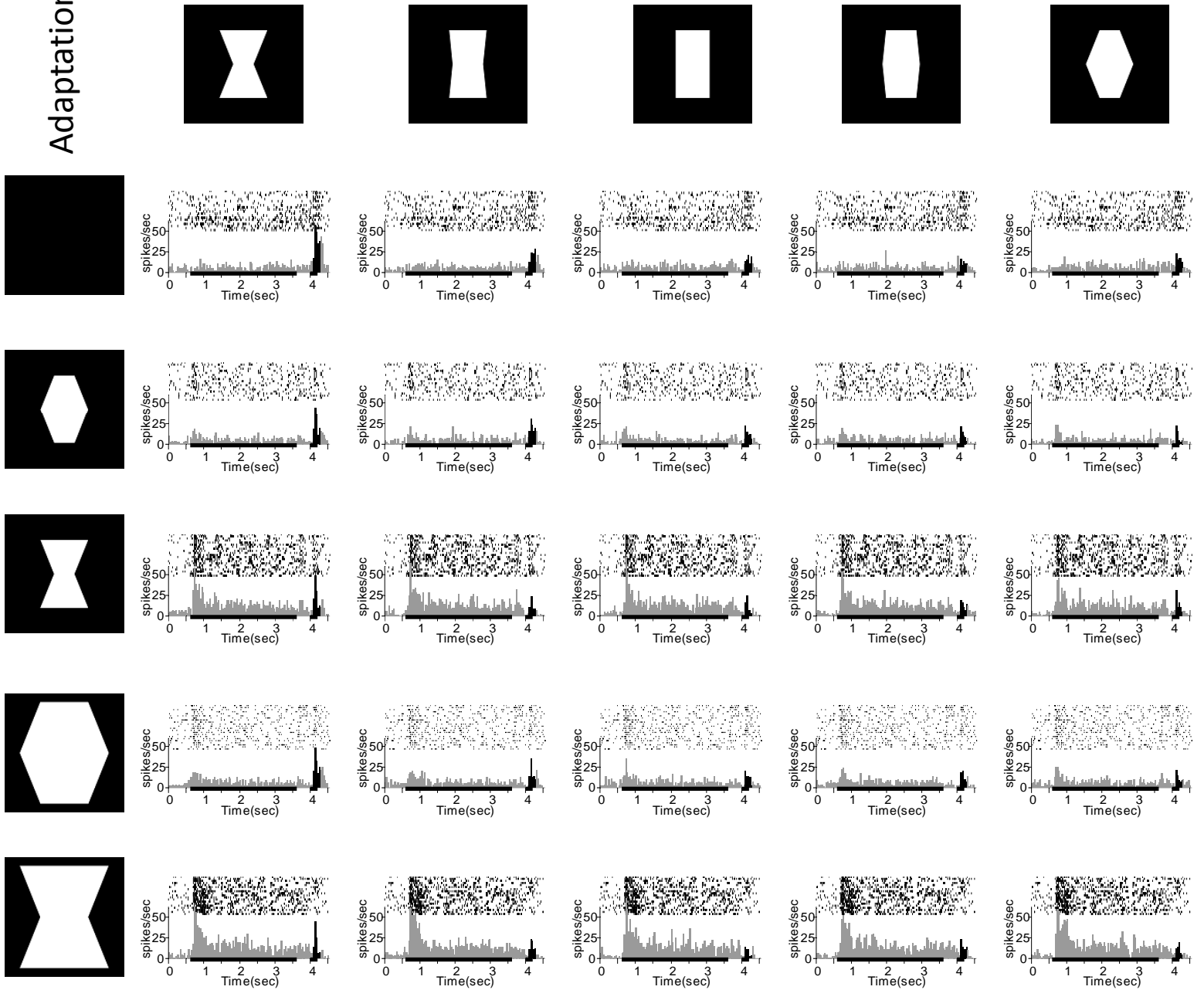
Supplementary Figure 4. Scatter plot of convexity tuning against effects of adaptation with larger stimuli. The strong correlation from Figure 3 is not observed with larger adaptors.

Supplementary Figure 5. Negative correlation between convexity tuning and the effects of adaptation removing the strongest data point. The same data as in Figure 3 is plotted without the strongest data point. The correlation remains significant.

Gattass R, Sousa AP, Gross CG, 1988. Visuotopic organization and extent of V3 and V4 of the macaque. *J. Neurosci* 8: 1831-1845.

Adaptation stimulus

Test stimulus

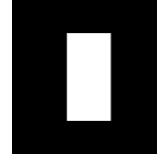


Stimulus Presentation

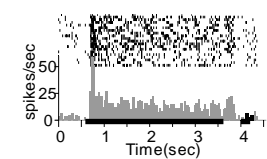
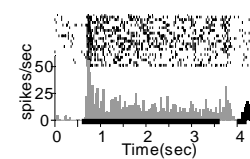
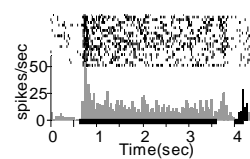
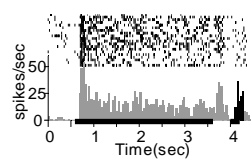
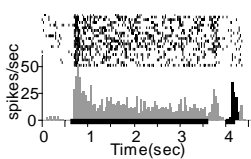
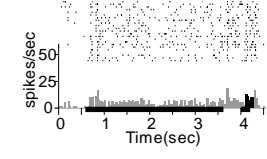
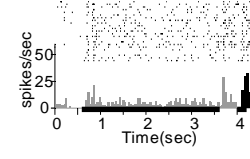
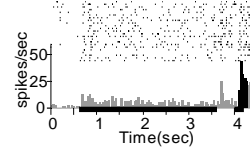
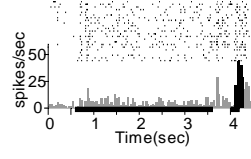
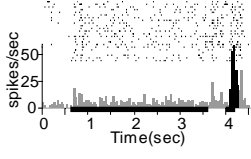
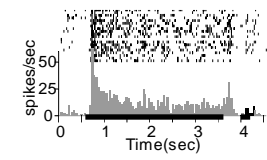
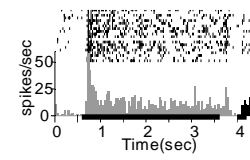
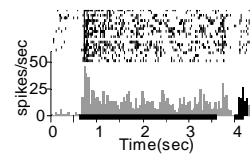
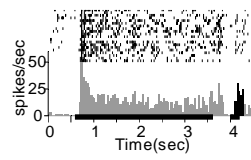
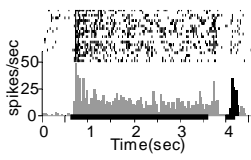
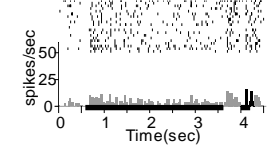
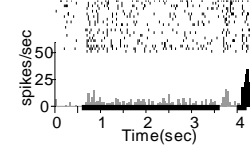
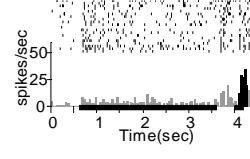
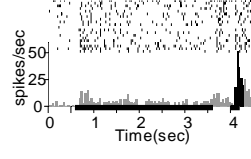
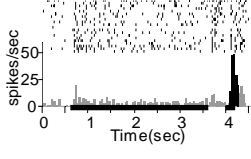
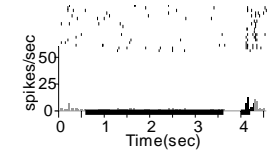
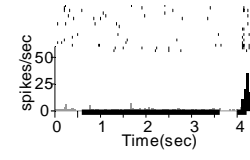
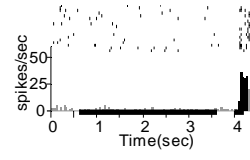
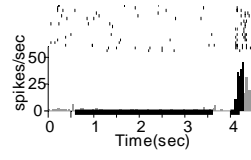
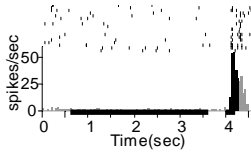
unit 140706-6

Supplementary Figure 1

Adaptation stimulus

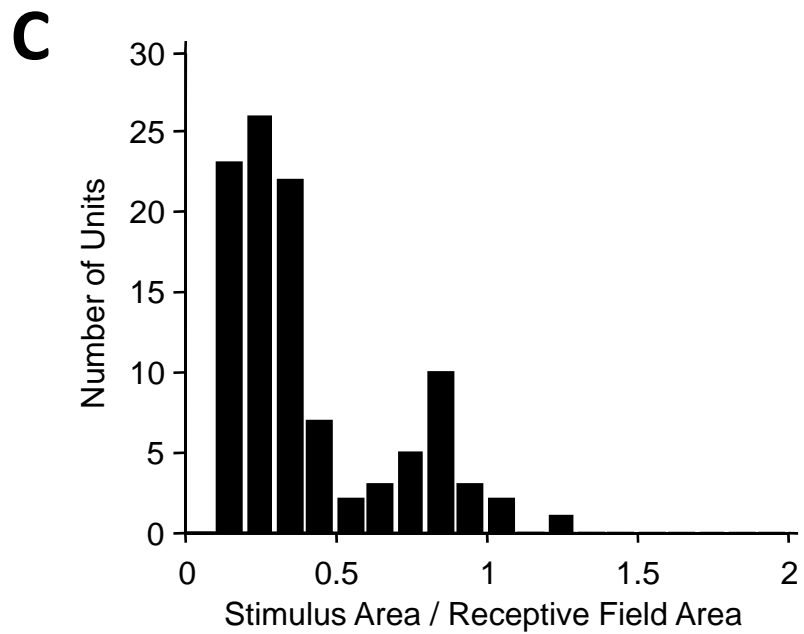
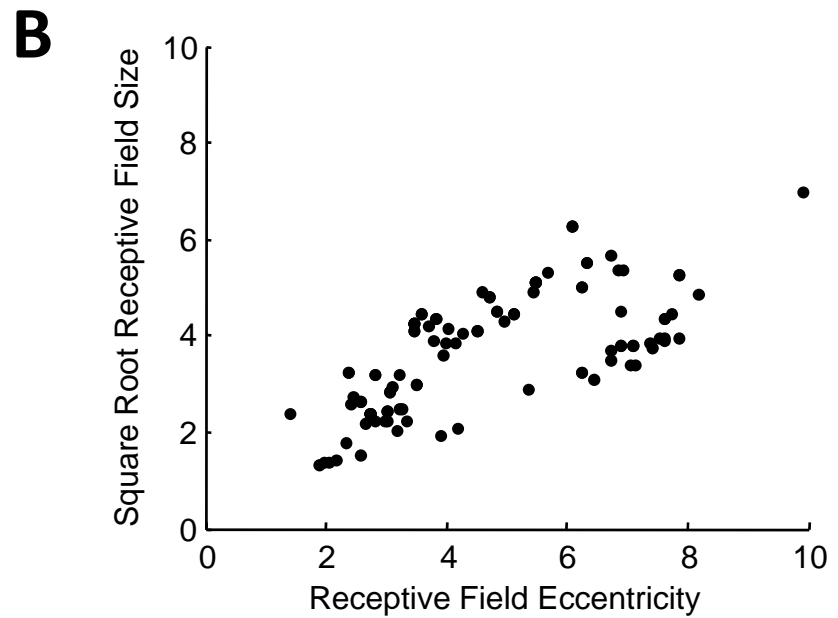
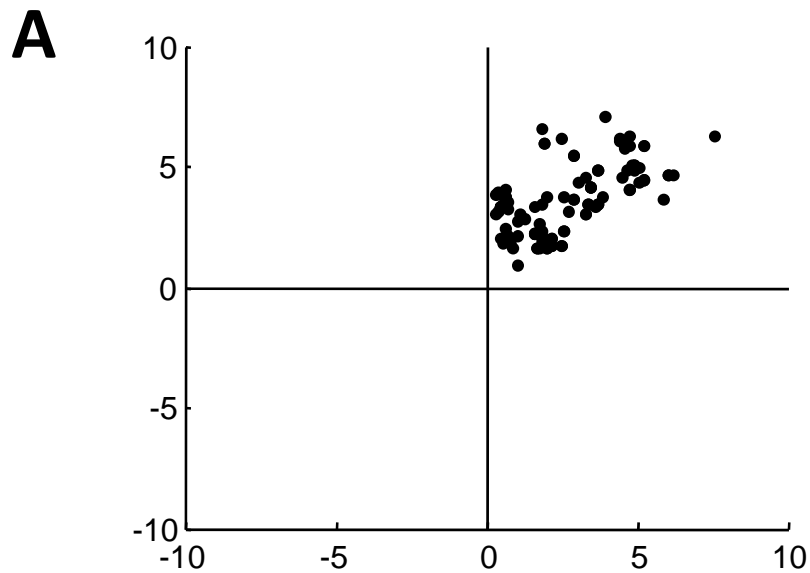


Test stimulus

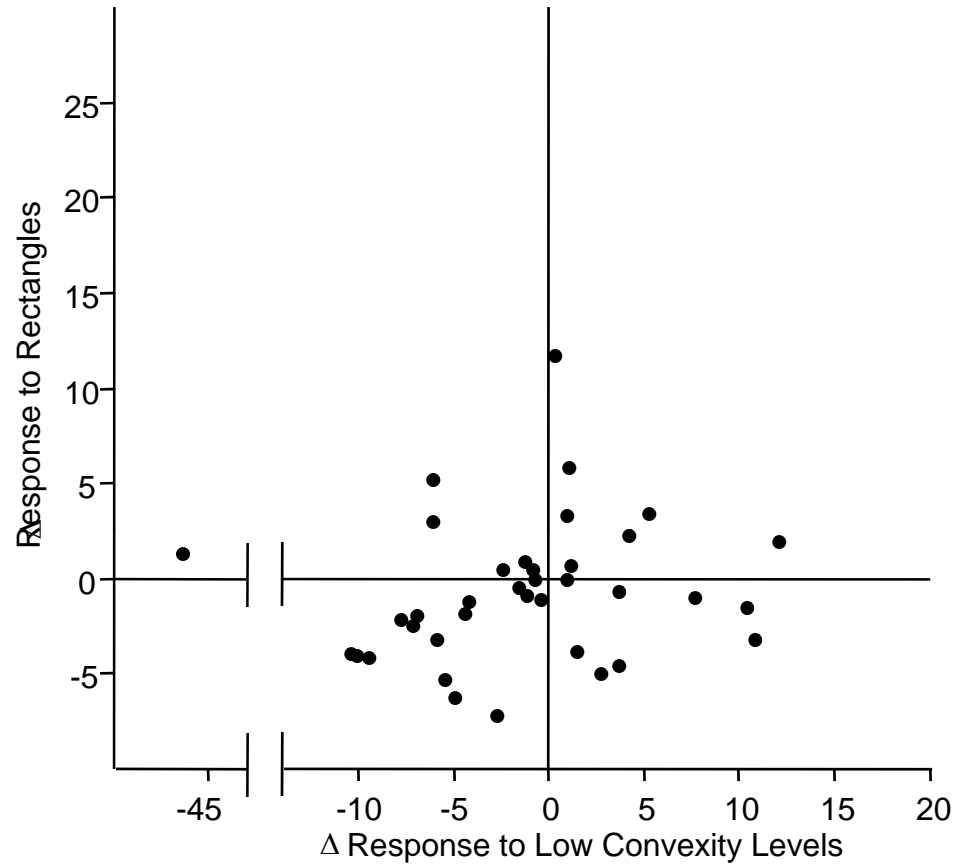
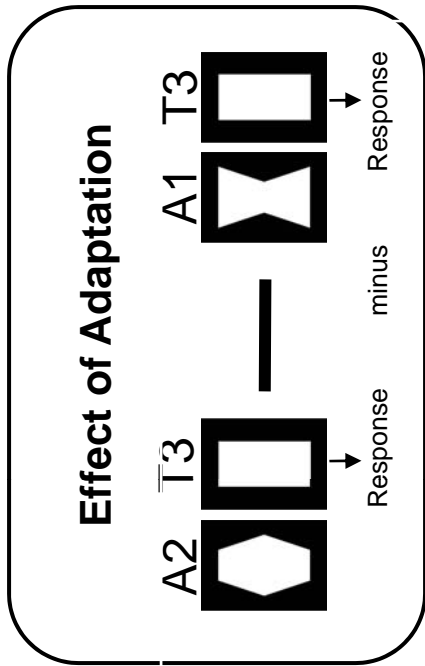


Stimulus Presentation

unit 141106-11



Supplementary Figure 3



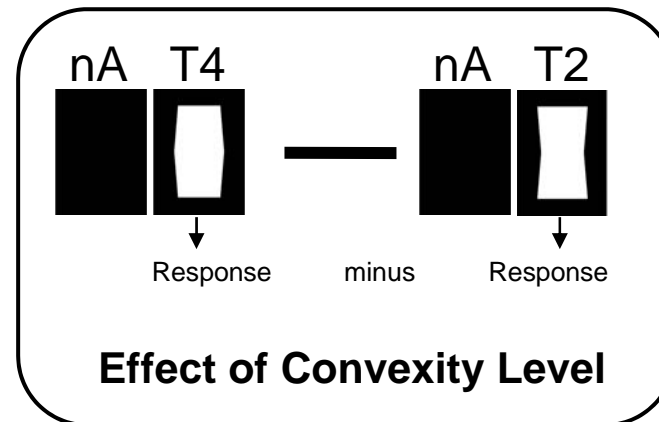
Adaptor 2.25 times larger than test

$n = 38$ tuned units

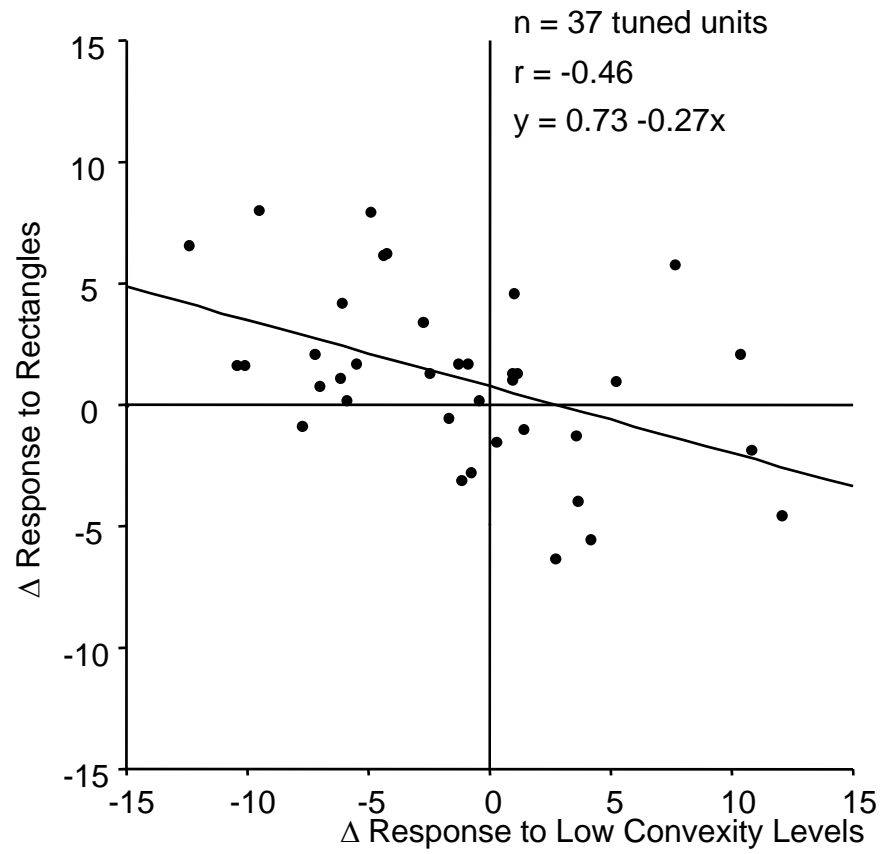
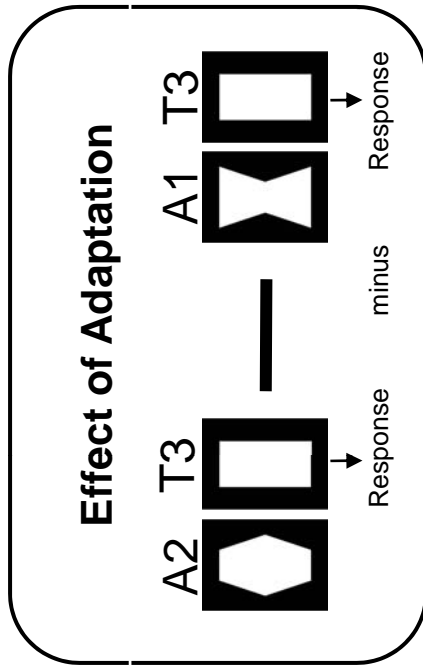
$r = 0.15$

$y = -0.87 + 0.07x$

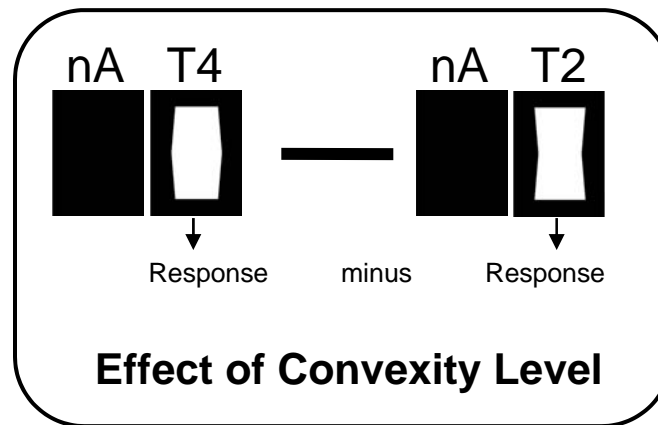
$p = 0.38277$



Supplementary Figure 4



Adaptor and test of same size,
 Excluding strongest data point (outlier)
 $p < 0.01$



Supplementary Figure 5