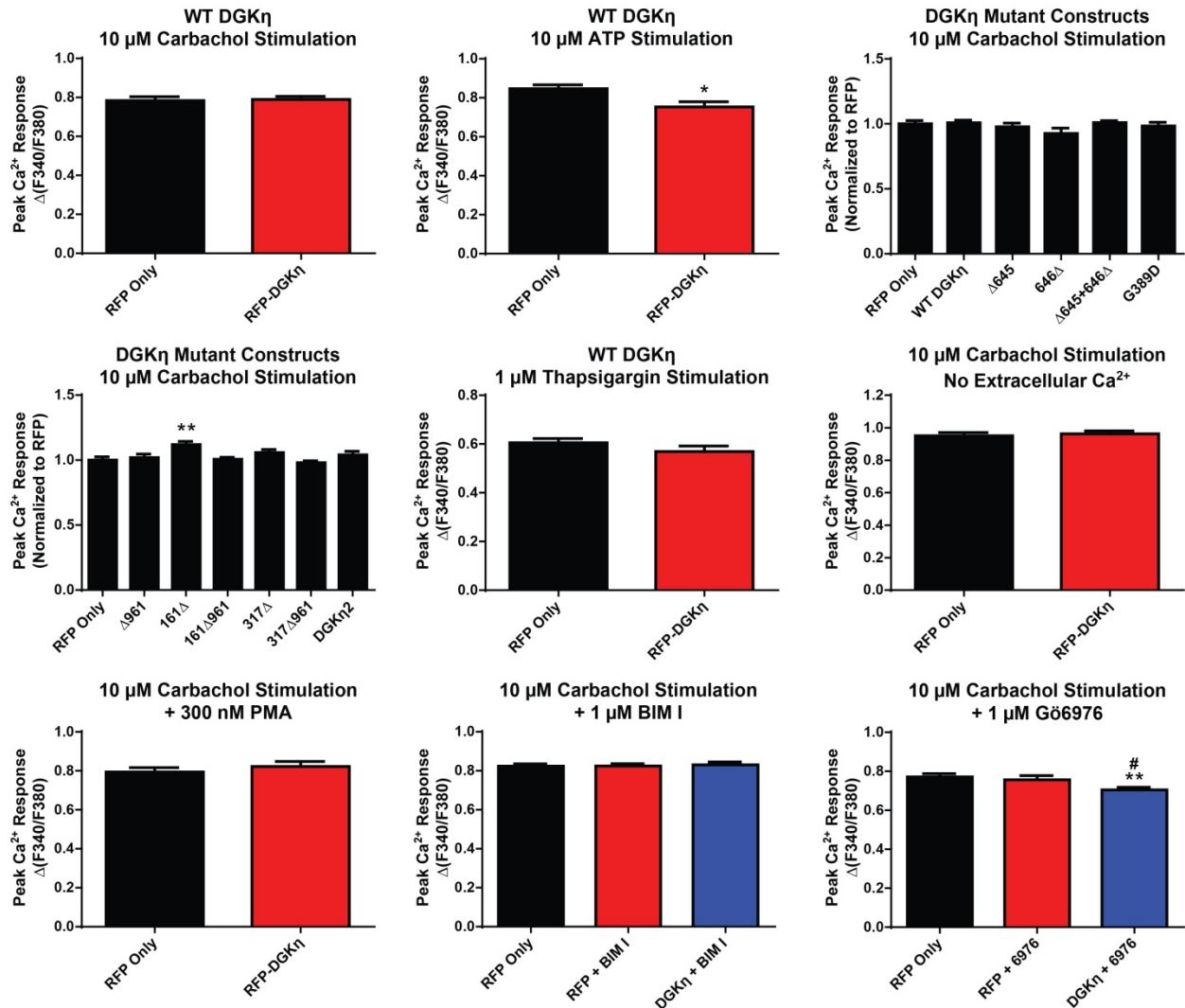


## Molecular Pharmacology

### Overexpression of diacylglycerol kinase eta (DGK $\eta$ ) enhances G $\alpha_q$ -coupled GPCR signaling.

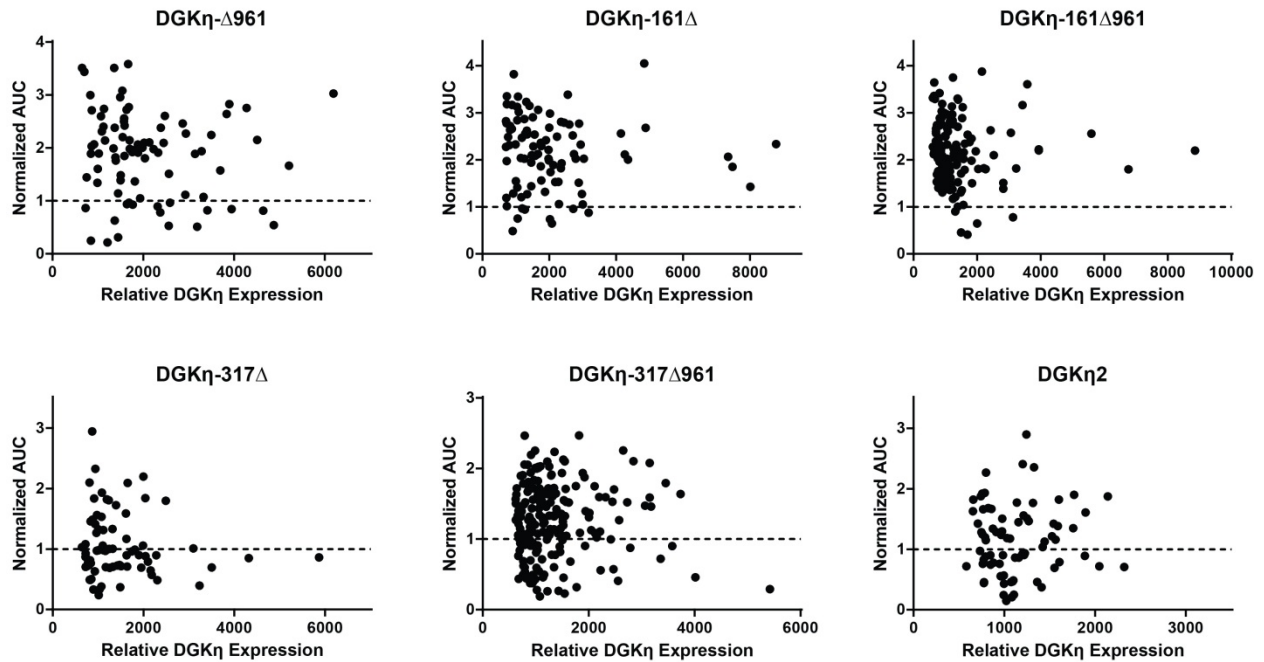
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**Supplemental Figure 1. Overexpression of DGK $\eta$  has negligible effects on the peak amplitude of calcium responses.** Comparisons of calcium response peak amplitudes for each calcium mobilization experiment presented in the main text. Peak responses were calculated relative to baseline Fura-2 ratios on a cell-by-cell basis, and averaged across all cells in each condition. For experiments comparing multiple DGK $\eta$  constructs, peak response amplitudes were normalized to the peak response amplitude in HEK293 cells expressing RFP alone. \*, < 0.05; \*\*,  $p < 0.01$  when compared with RFP alone. #,  $p < 0.05$  when compared with RFP + Gö6976. Unpaired t tests were used to compare data. All data are presented as means  $\pm$  S.E.



**Supplemental Figure 2. *In vitro* kinase assay normalization western blots.** Representative normalization blots used for the DGK $\eta$  *in vitro* kinase assay. HEK293 cells expressing the indicated constructs were lysed and kept on ice. After being used in the kinase assay, samples of each lysate were western blotted and probed with an anti-RFP antibody.



**Supplemental Figure 3. There is no relationship between DGK $\eta$  expression level and calcium mobilization among DGK $\eta$  constructs.** Scatter plots comparing calcium mobilization AUC measurements to DGK $\eta$  expression levels in individual HEK293 cells expressing the indicated DGK $\eta$  truncation or long isoform constructs. Horizontal dashed line indicates average level of calcium mobilization in HEK293 cells expressing RFP alone. Equivalent data for WT DGK $\eta$  and DGK $\eta$ -G389D is presented in Fig. 2E.