

Figure 1. Engineered “receiver” and “sender” cells enable quantitative comparison of receptor-ligand interactions

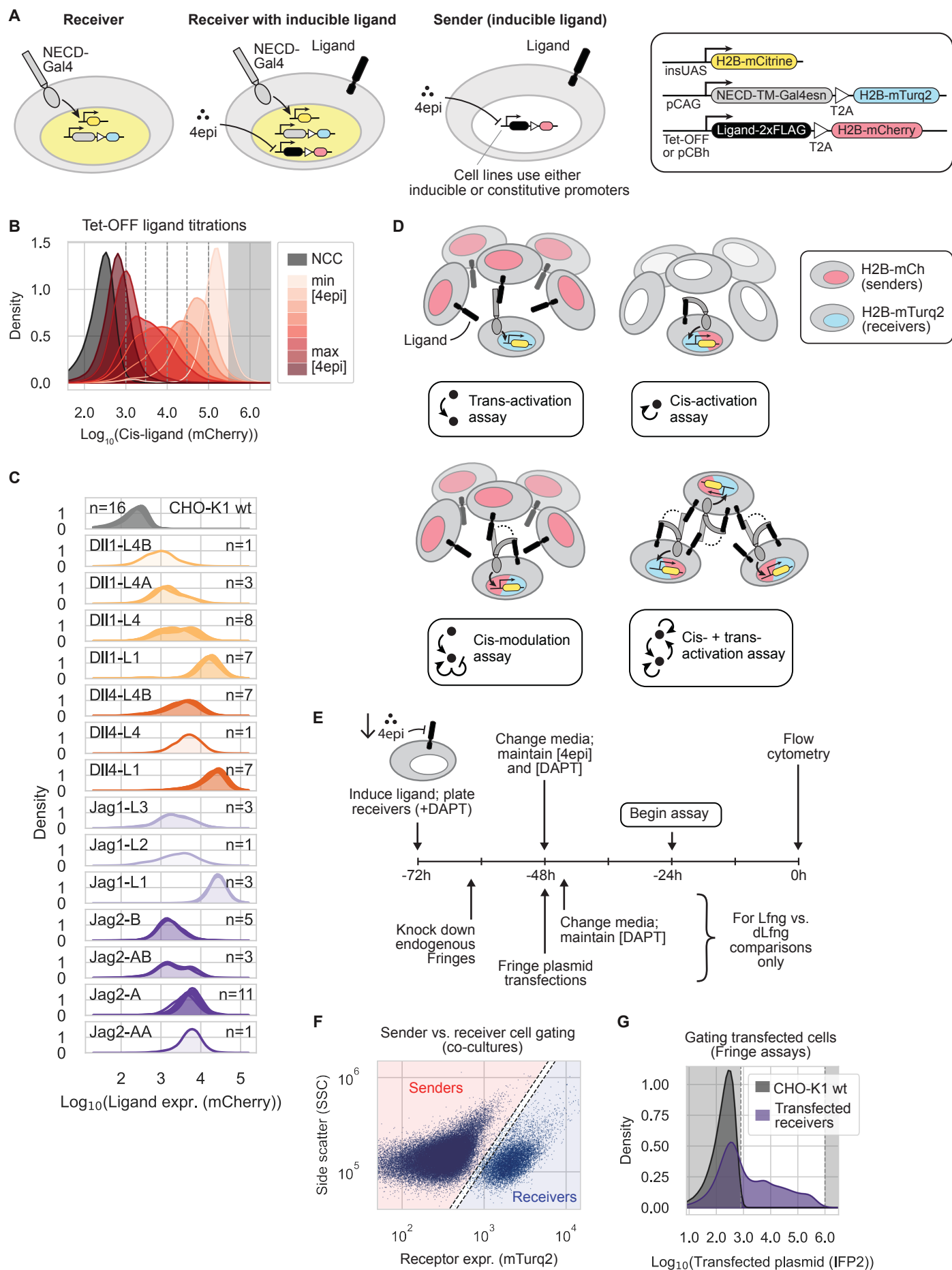


Figure 2. Trans-activation properties depend on ligand and receptor identity, and are modulated by Lfng

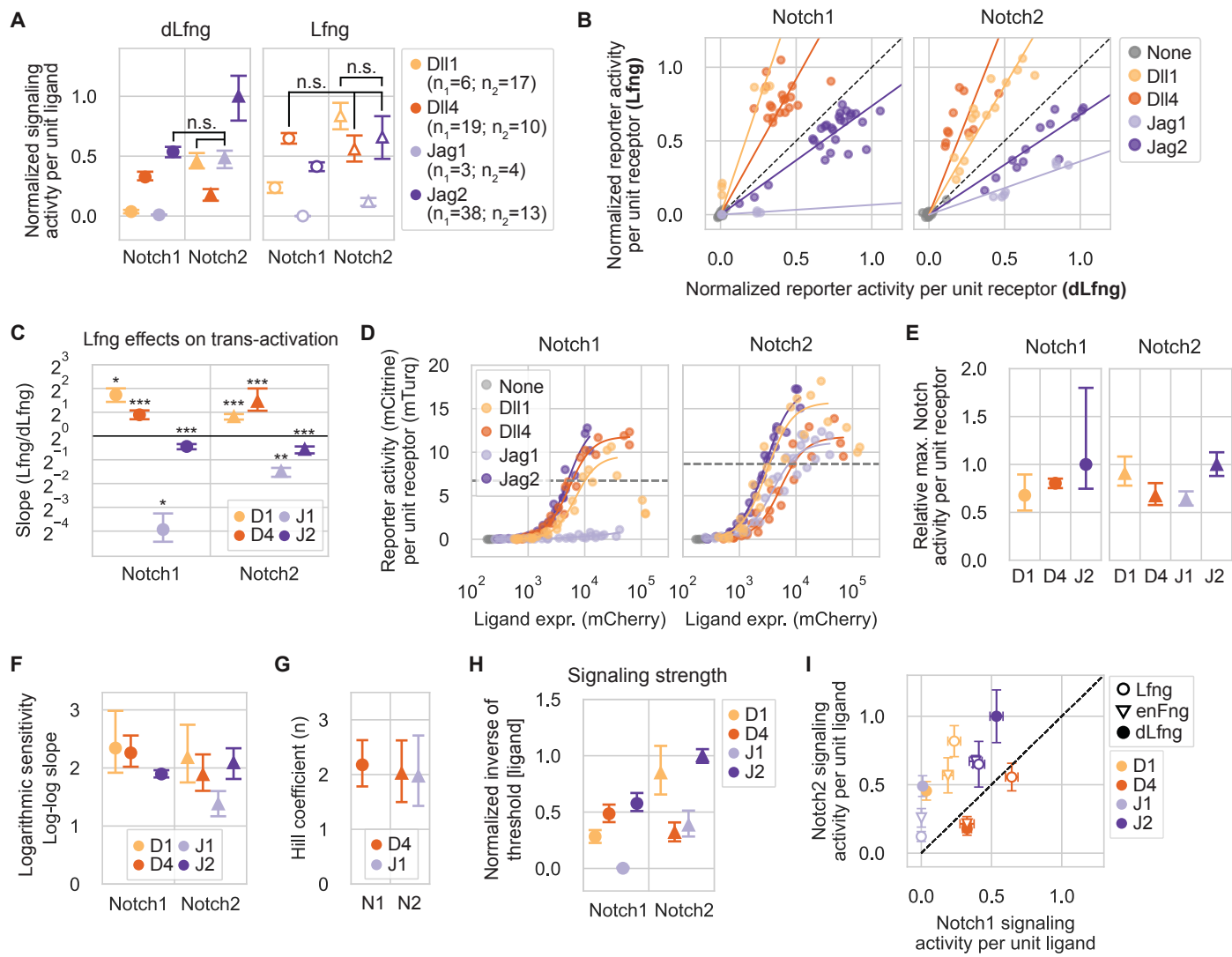


Figure 3. Signaling properties of recombinant ligands

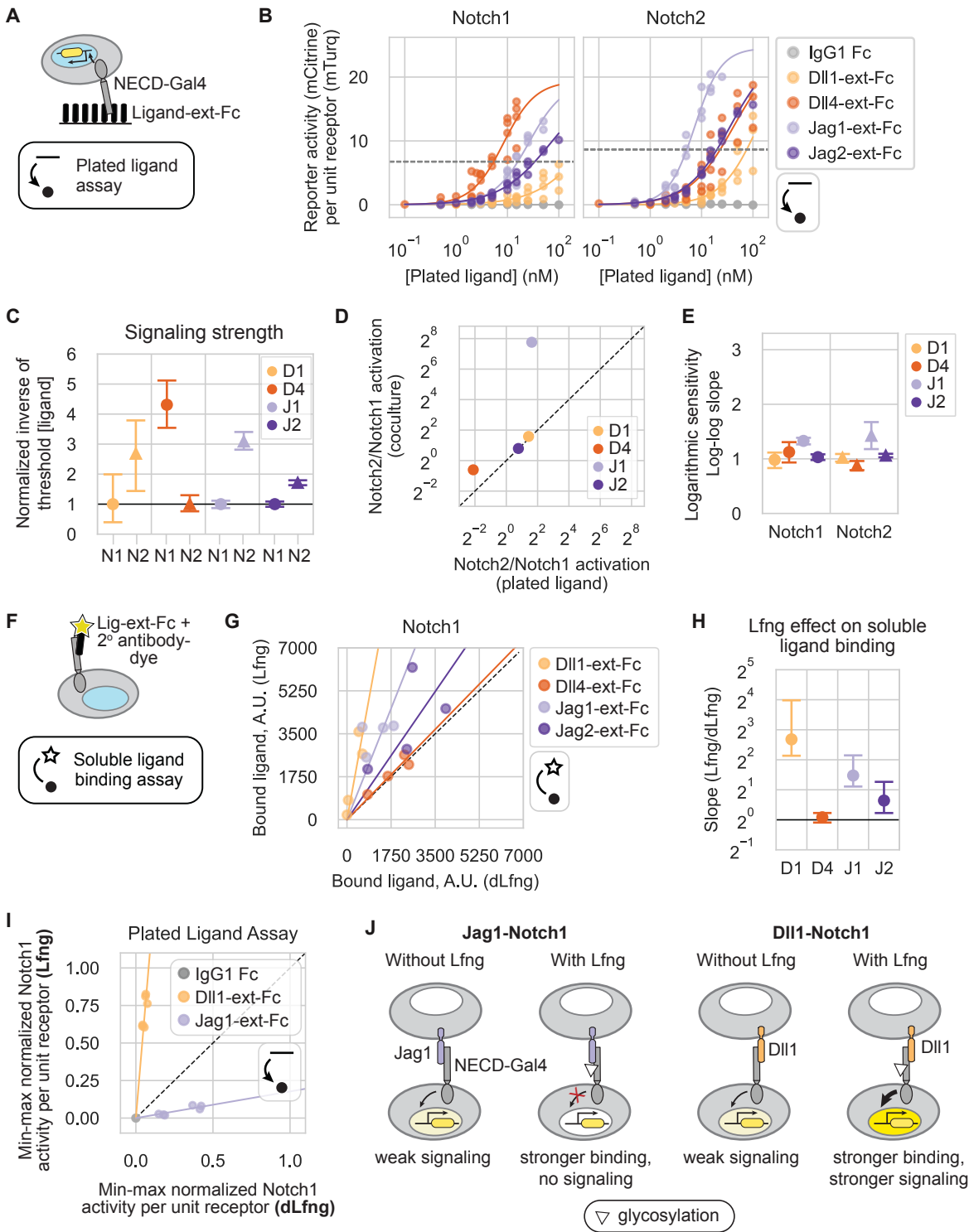


Figure 4. Cis interaction outcomes depend on receptor and ligand identity

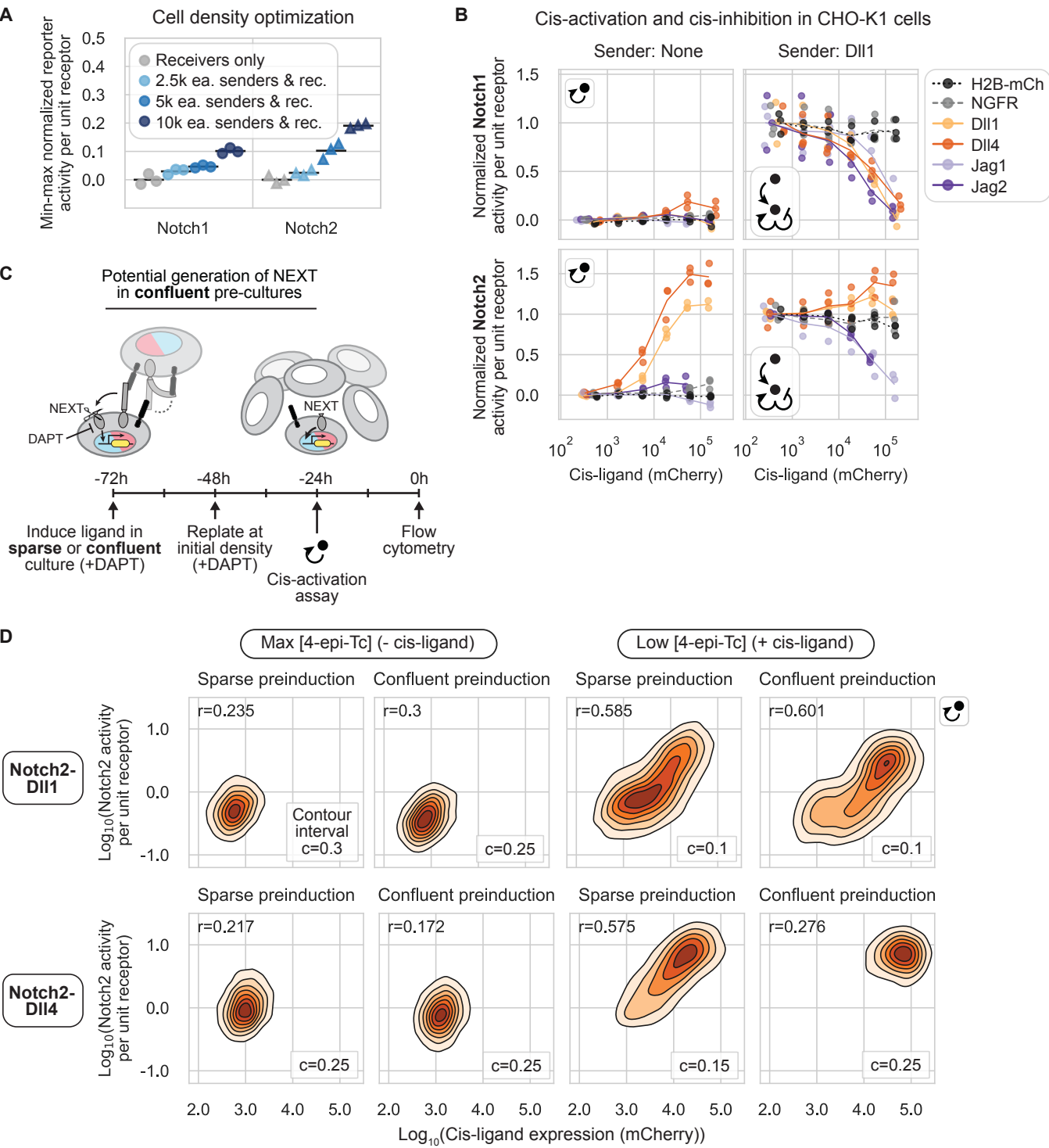




Figure 5. Coexpression of ligands and receptors can produce cis or trans signaling in confluent monolculture

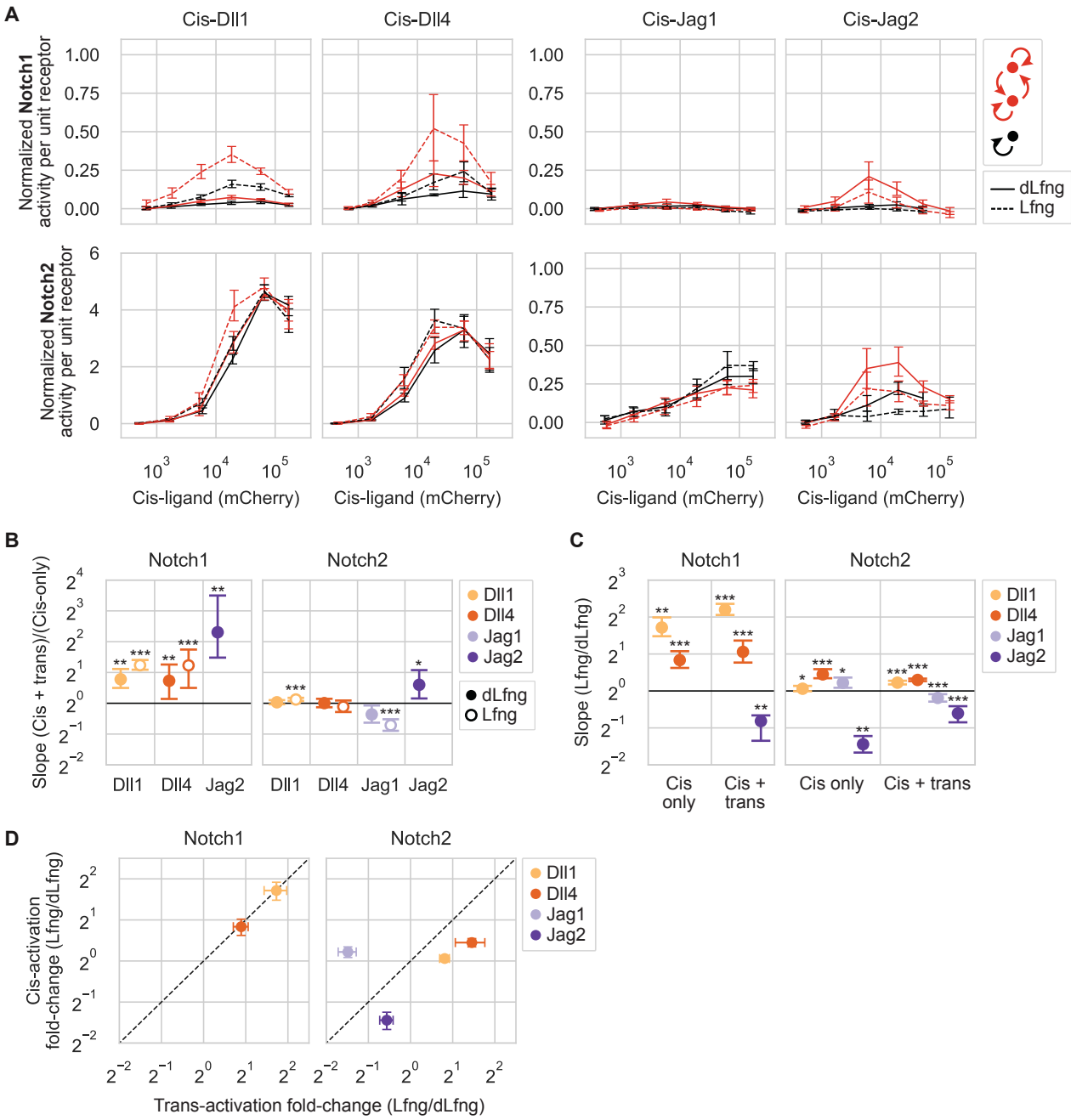


Figure 1-S2. The Tet-OFF system enables sender cells with inducible expression of each of the four ligands

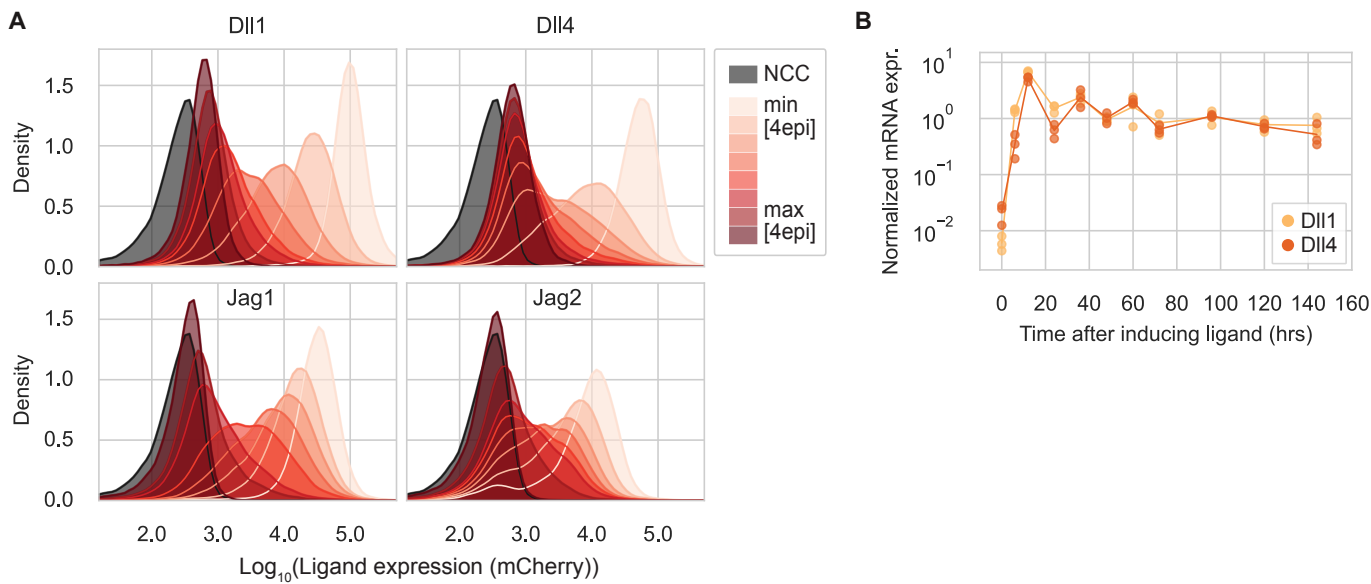


Figure 1-S3. Knockdown of endogenous Lfng and Rfng in CHO-K1 cells

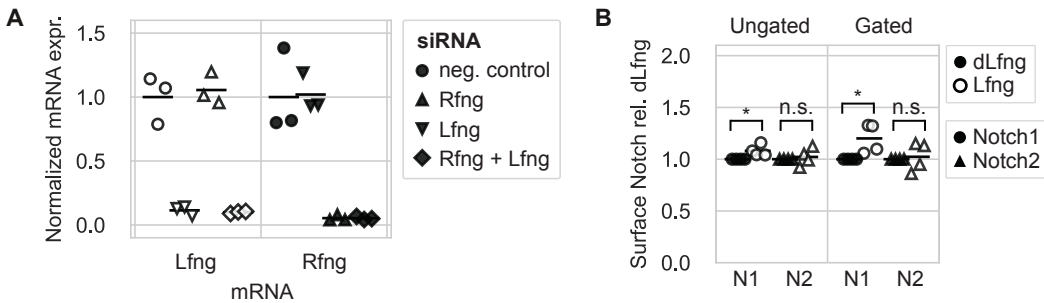


Figure 2-S1. Statistical analysis of differences in trans-activation strength for all receptor-ligand-Fringe combinations

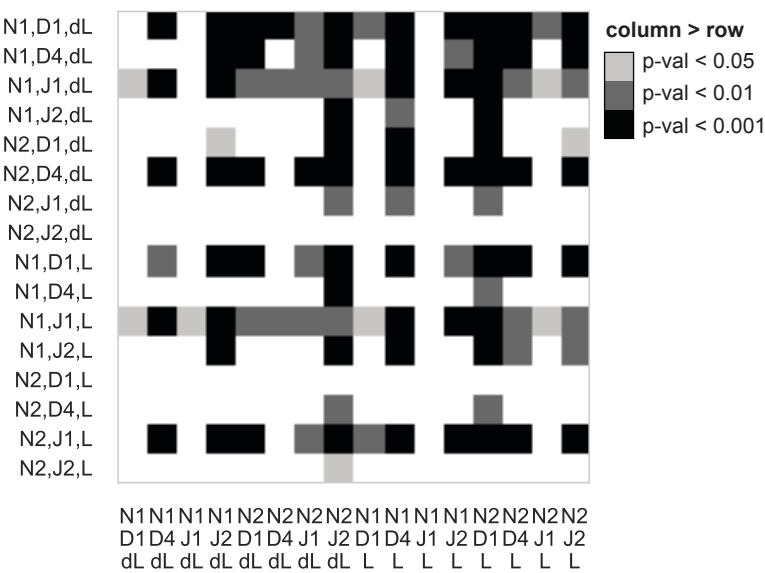


Figure 2-S2. Notch trans-activation in coculture is modestly ultrasensitive

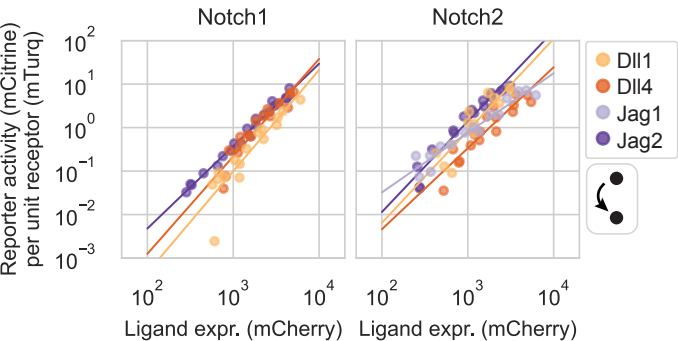


Figure 5-S5. Lfng effects on cis-activation and cis- + trans-activation

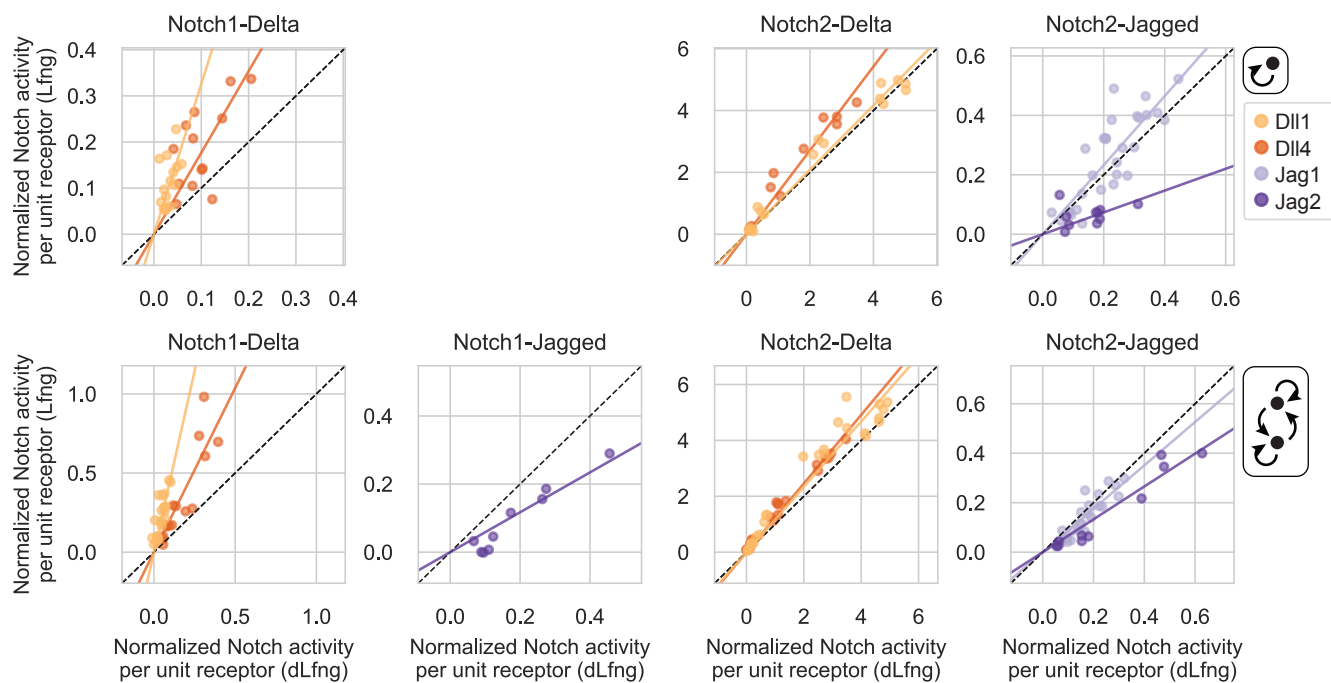


Figure 1-S1. The Tet-OFF system enables unimodal titration of cis ligand levels with Notch1 or Notch2 receptors

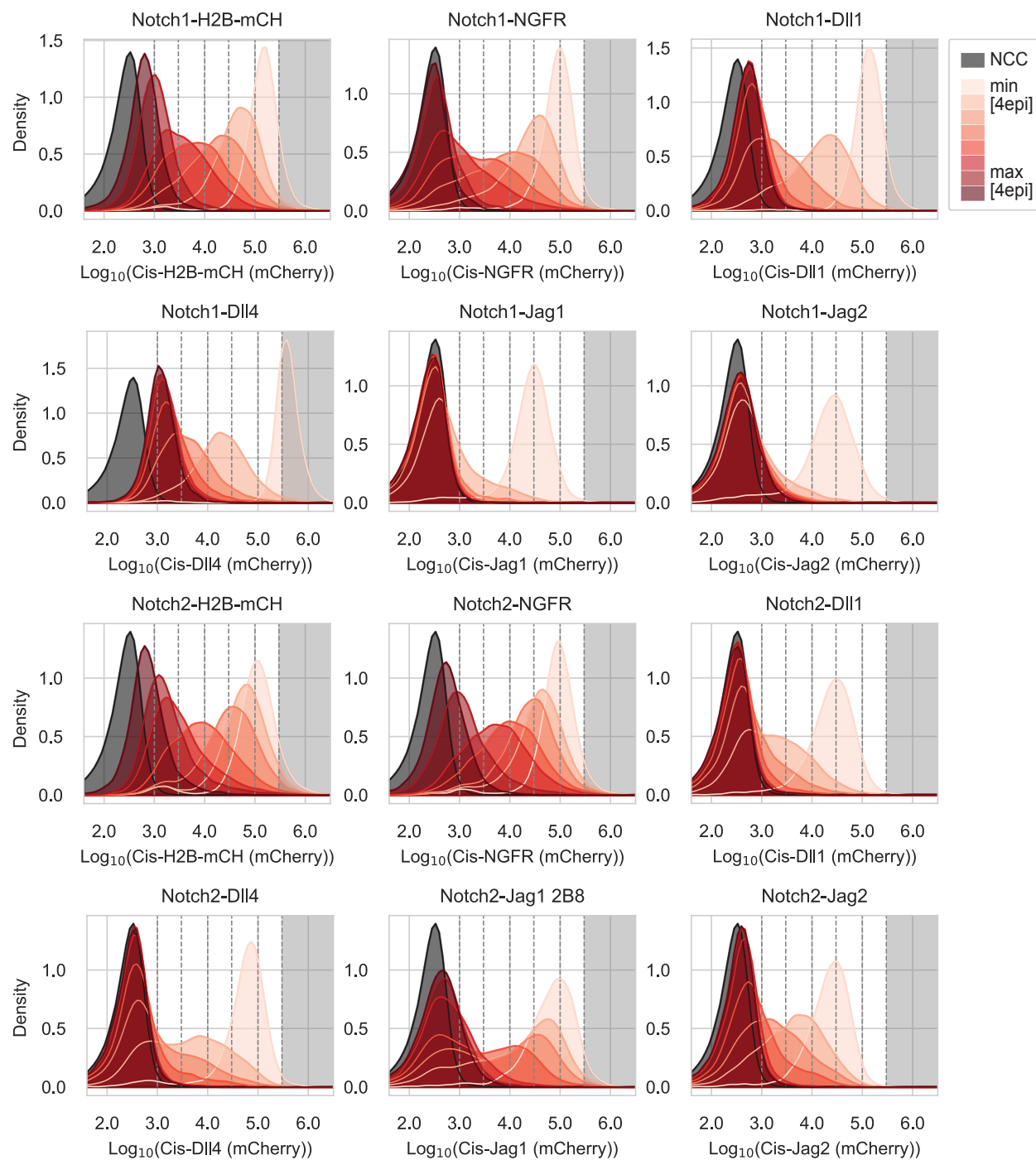


Figure 5-S3. Allowing intercellular contacts between cells coexpressing ligands and receptors alters signaling activity

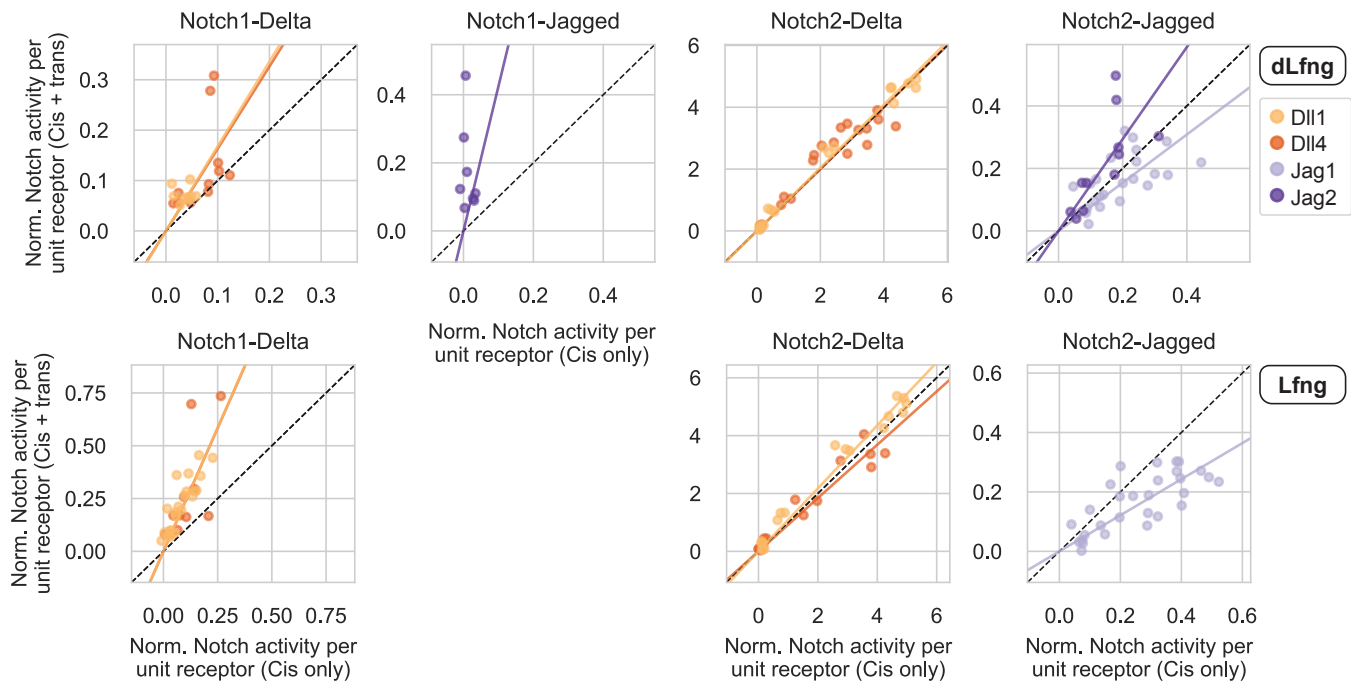


Figure 5-S4. CHO-K1 receiver clones' reporter dynamic ranges with minimum cis-ligand expression

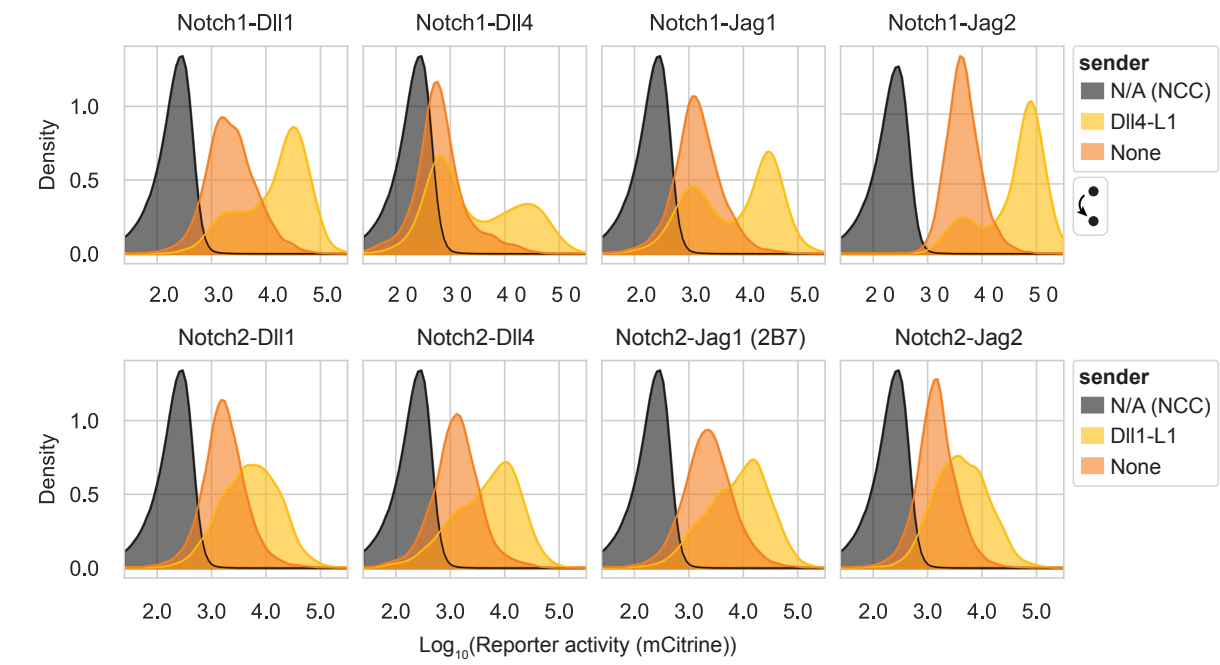


Figure 5-S1. CHO-K1 receiver clones' cis-ligand expression distributions for the cis-activation assay and cis + trans-activation assay

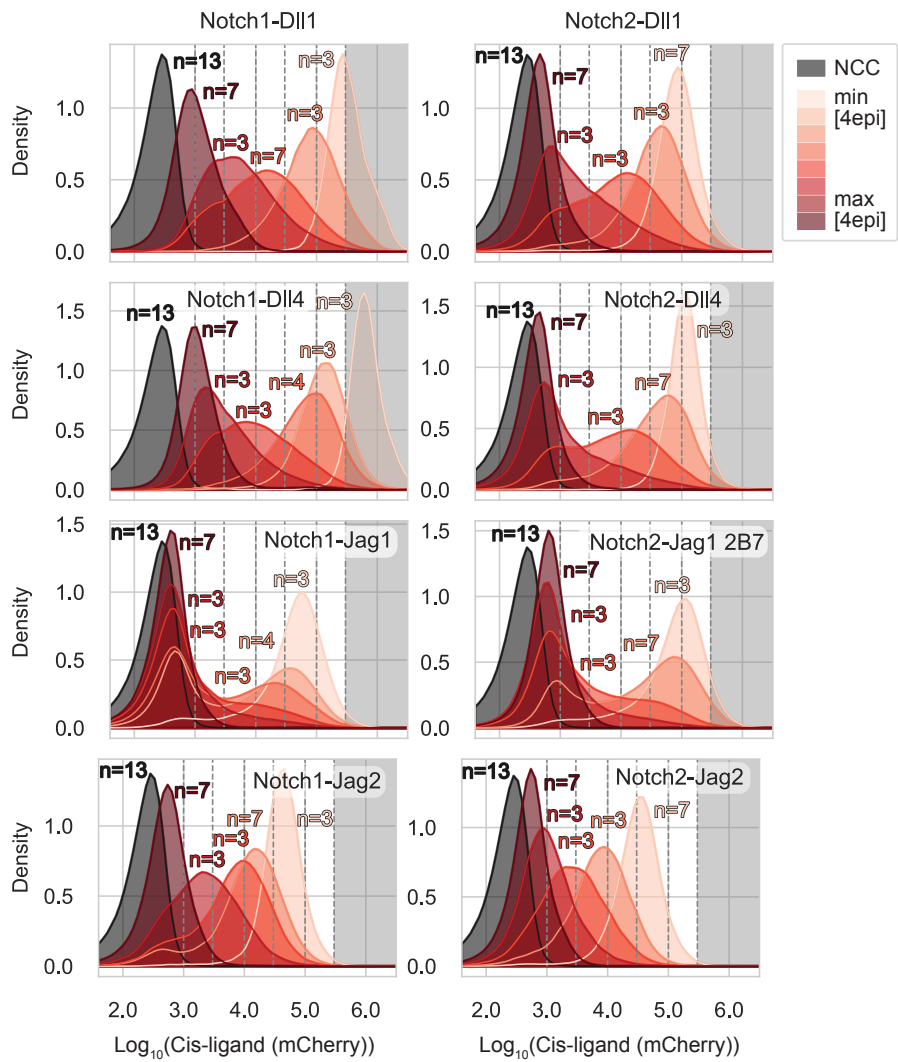


Figure 5-S2. Flow cytometry data analysis pipeline without mCherry binning yields similar results

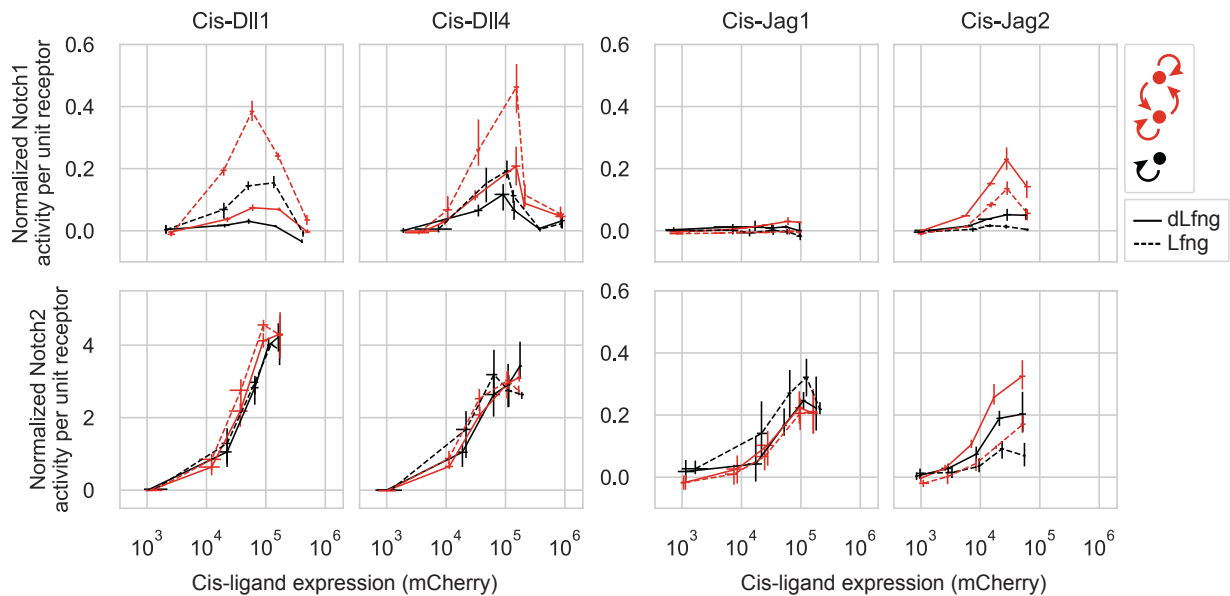




Figure 6. Cis-inhibition strengths depend on the identities of the receptor, the cis-ligand, and the trans-ligand

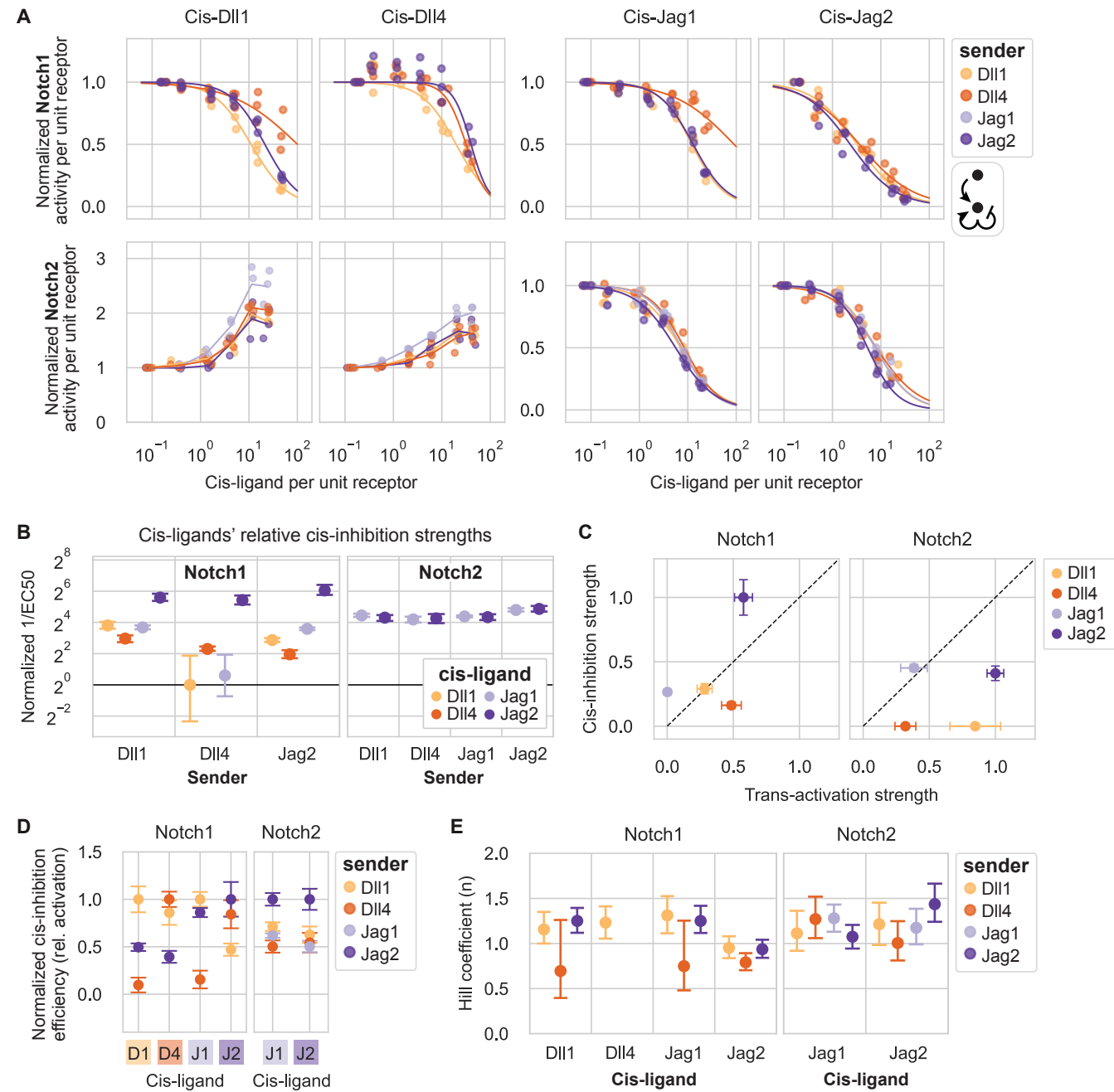


Figure 4-S1. CHO-K1 receiver clones' reporter dynamic ranges with minimum cis-ligand expression

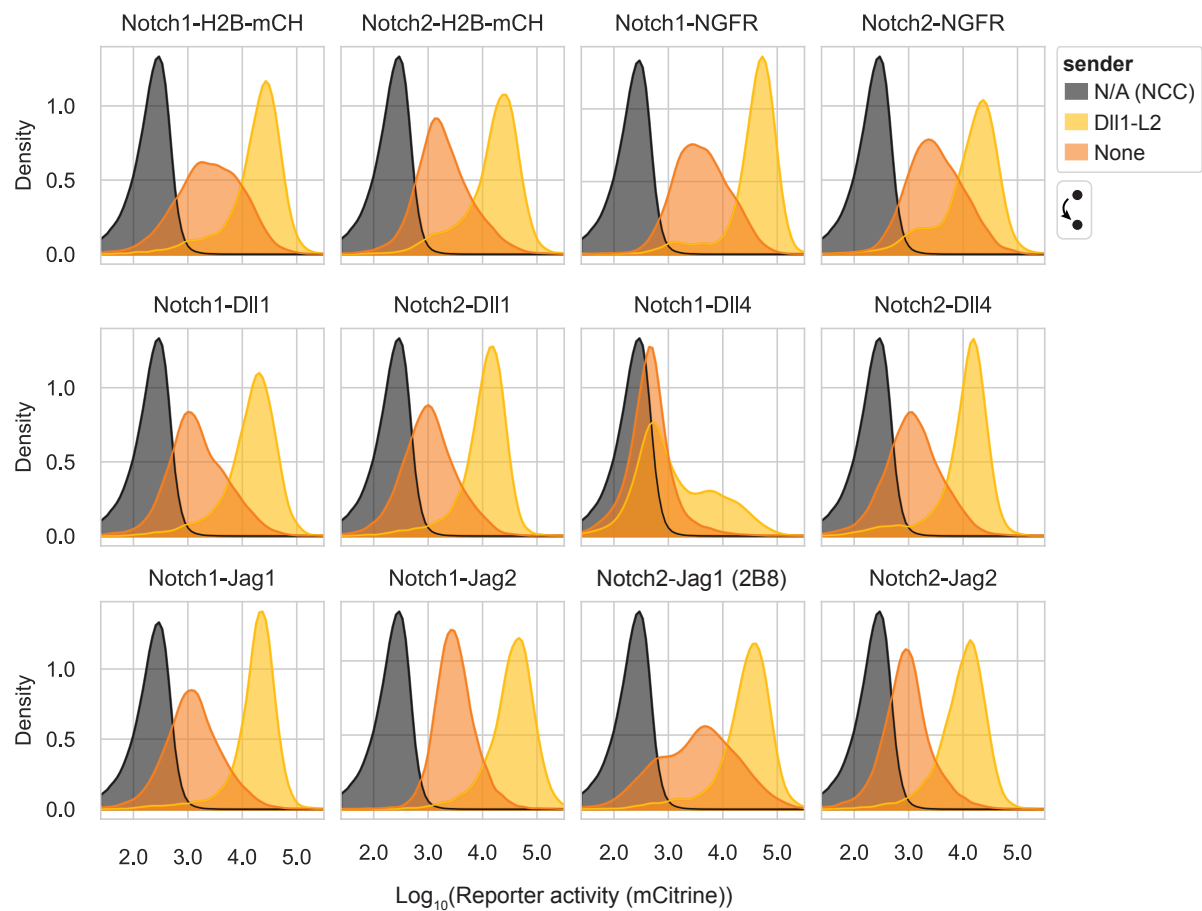


Figure 4-S2. Cell density can affect expression in the Tet-OFF system

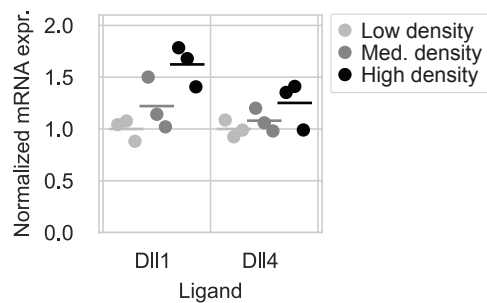


Figure 6-S1. Ligands' trans-activation strengths show greater diversity for Notch1 than Notch2

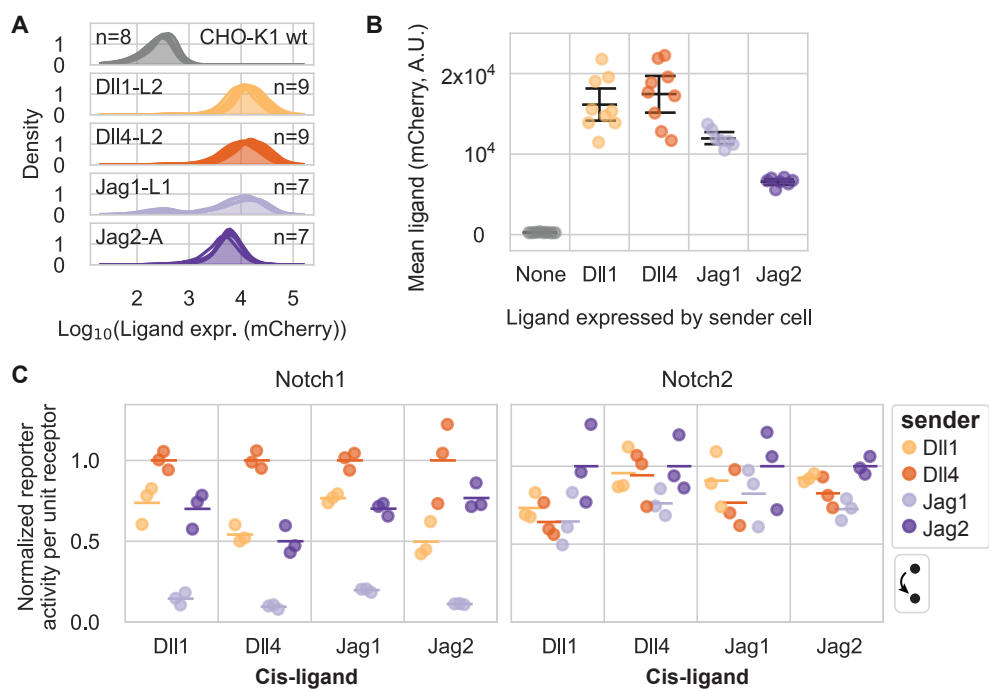


Figure 7. Key trans and cis signaling behaviors are similar between the CHO-K1 and C2C12 backgrounds

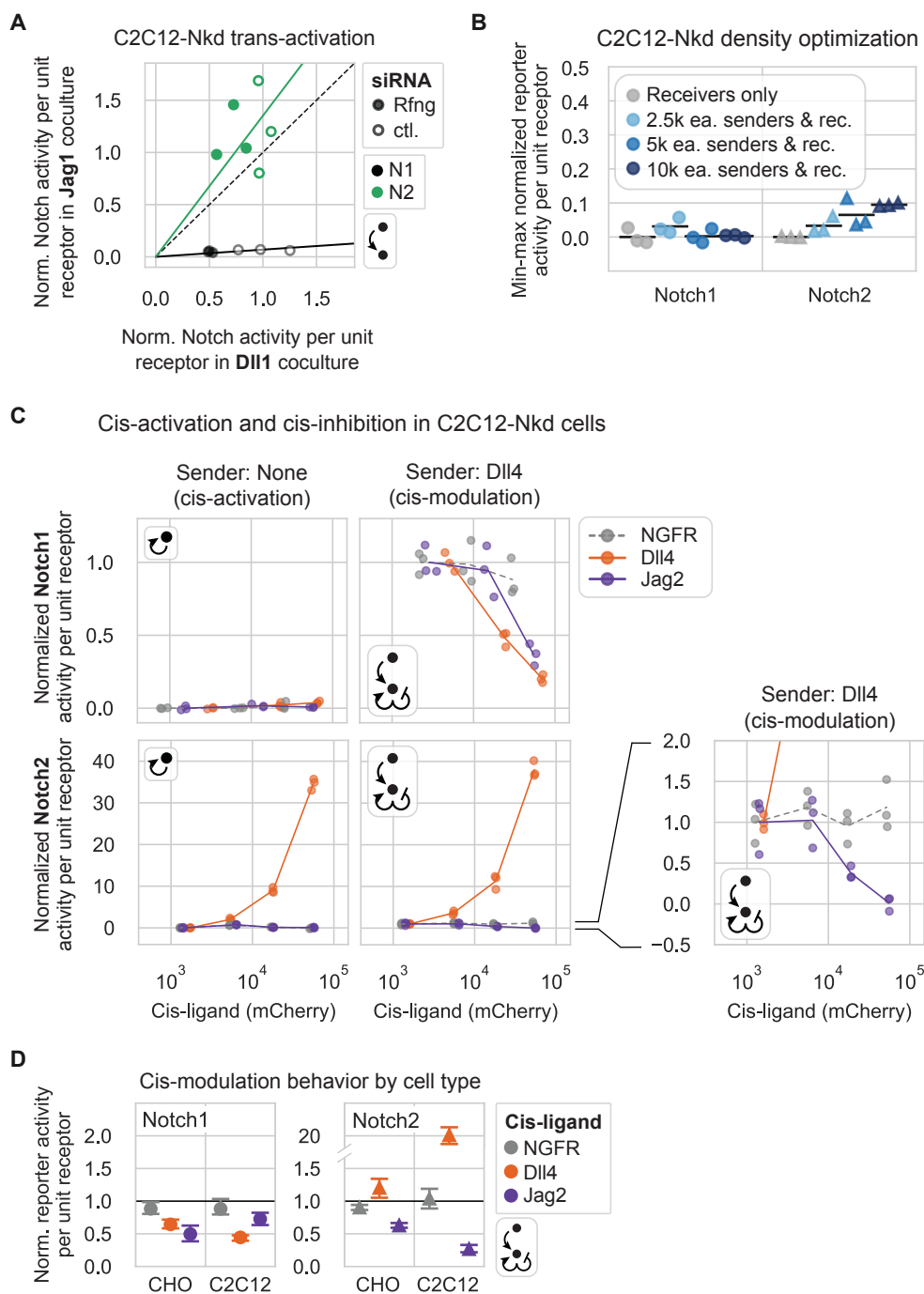


Figure 8. Each receptor-ligand combination has a unique activity profile

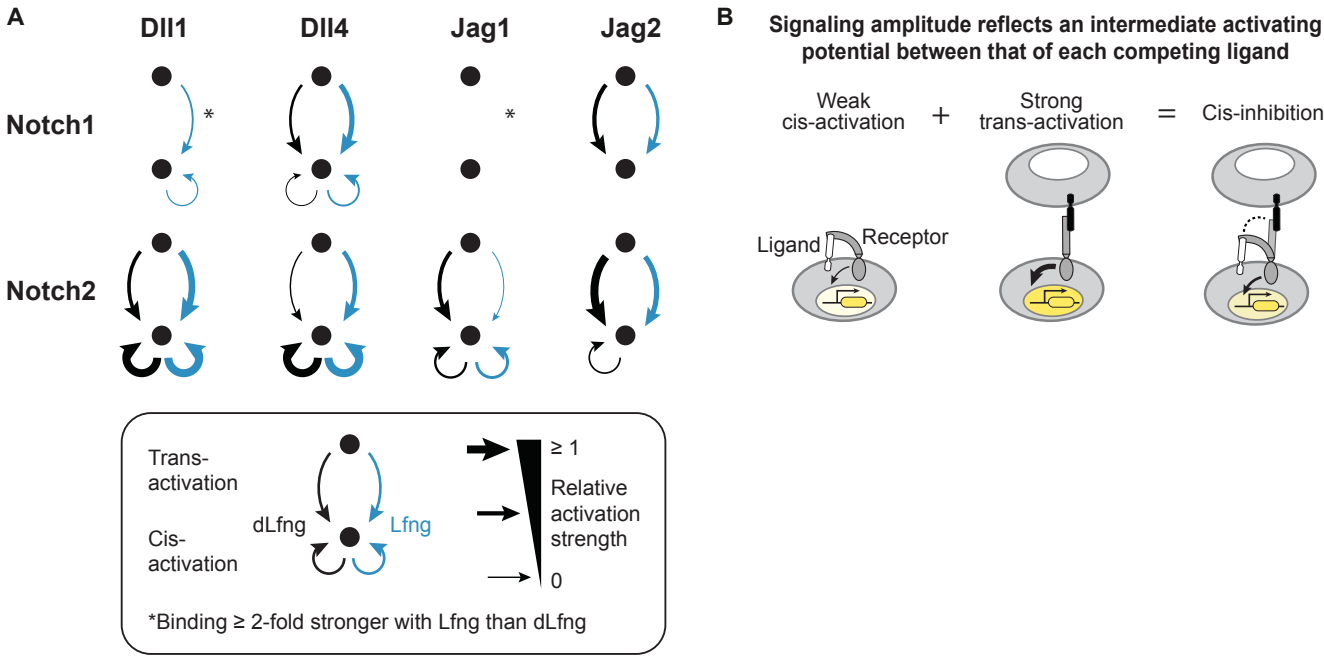


Figure 7-S1. CRISPR/Cas9 editing of C2C12 cells yields Notch-depleted clone C2C12-Nkd used to analyze signaling properties

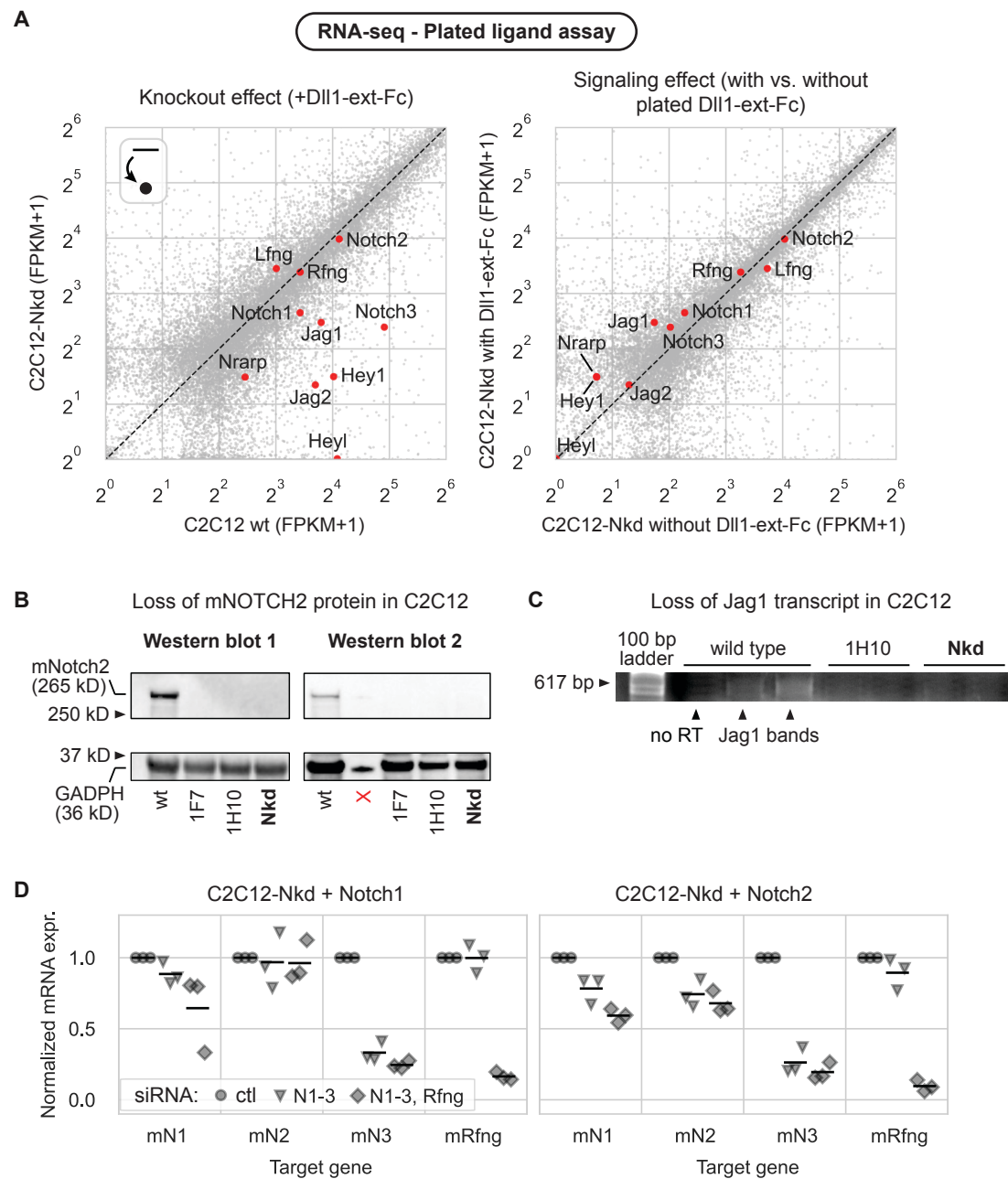


Figure 3-S1. Notch activation by plated ligands is not ultrasensitive

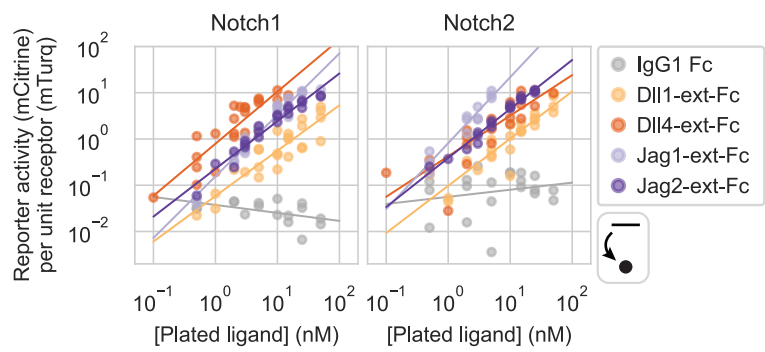




Figure 2-S3. Relative activation strengths with endogenous CHO-K1 Fringes reflect an intermediate state between dLfng and Lfng

