

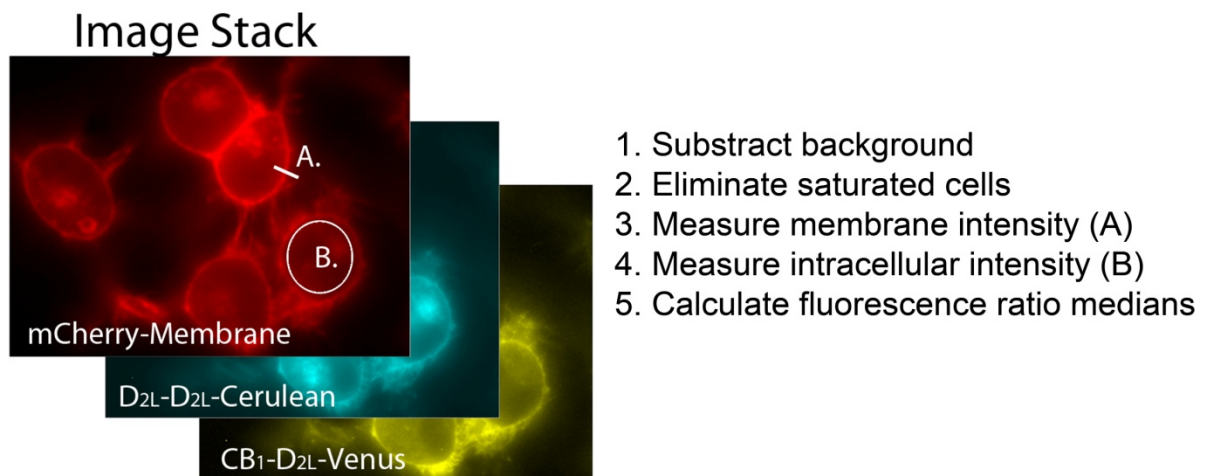
Authors: Julie A. Przybyla and Val J. Watts

Title: Ligand-Induced Regulation and Localization of Cannabinoid CB<sub>1</sub> and Dopamine D<sub>2L</sub>

Receptor Heterodimers

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## Supplemental Figure 1



Flowchart of the analysis of microscopic multicolor BiFC measurements. Fluorescent BiFC signals (CB<sub>1</sub>-VN/D<sub>2L</sub>-CC and D<sub>2L</sub>-CN/- D<sub>2L</sub>-CC), as well as mCherry-Mem fluorescent signals, are imaged by epifluorescence microscopy. The mCherry-Mem membrane marker signals were used to select cells for image analysis and to normalize BiFC signals. The fluorescent signal intensity maximum at the membrane was determined by drawing a perpendicular line through the membrane using the mCherry-Mem image (see A.). The average BiFC signal intensity in the intracellular space was determined by outlining the intracellular compartment (excluding the plasma membrane, see B.).

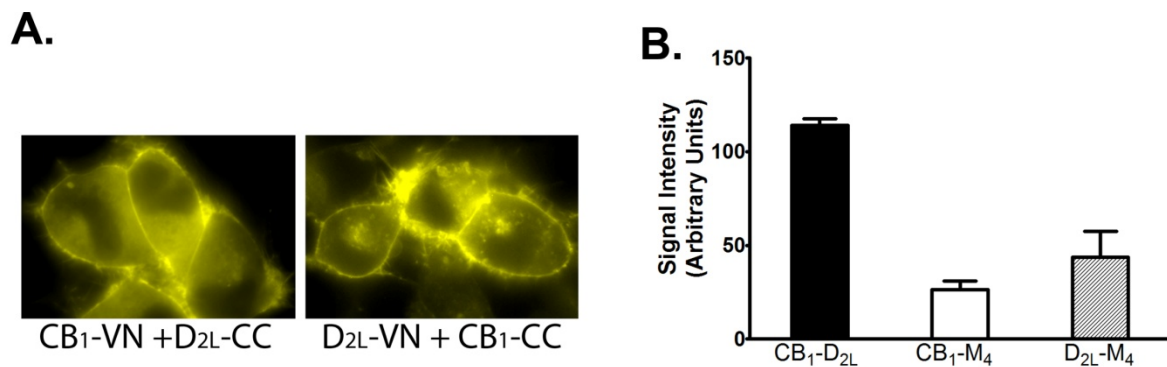
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## Supplemental figure 2



**A.** BiFC complementation in CAD cells. Co-expression of CB<sub>1</sub>-VN + D<sub>2L</sub>-CC or D<sub>2L</sub>-VN + CB<sub>1</sub>-CC in CAD cells produced robust Venus signals in CAD cells. **B.** Fluorescent signals from Venus complementation (VN-VC) in CAD cells transfected with CB<sub>1</sub>-VN + D<sub>2L</sub>-CC, CB<sub>1</sub>-VN + M<sub>4</sub>-CC, or D<sub>2L</sub>-CC + M<sub>4</sub>-VN. Whole cell signals were quantified by measuring the average signal intensity in the Venus channel.

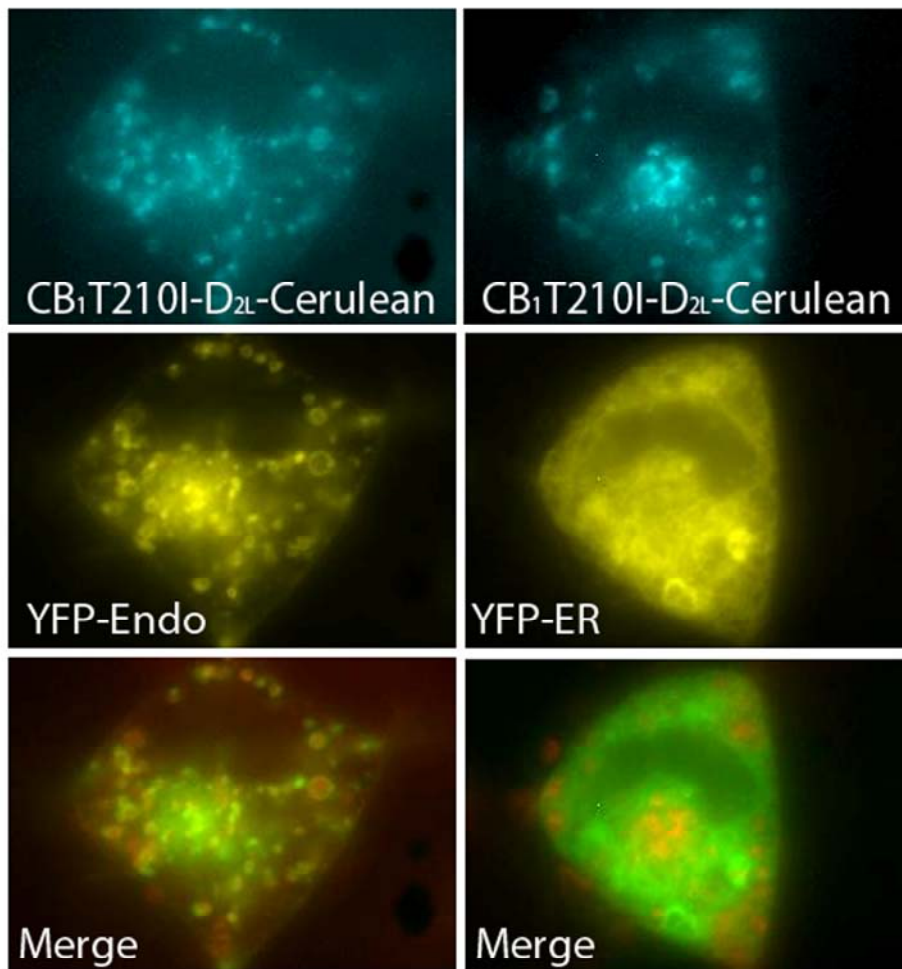
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### Supplemental Figure 3



Intracellular localization patterns of CB<sub>1</sub>T210I-D<sub>2L</sub> heteromers. CAD cells were transiently transfected with CB<sub>1</sub>T210I-CC and D<sub>2L</sub>-CN (cyan signal) along with YFP fluorescent marker proteins for the endosomes or the ER (yellow signal). The merged image (overlapping signal in yellow) represents an overlap of the BiFC signal (depicted in red) and the fluorescent marker signal (depicted in green). Images are representative of 2 independent transfections.