## **Supplemental Figure 1**

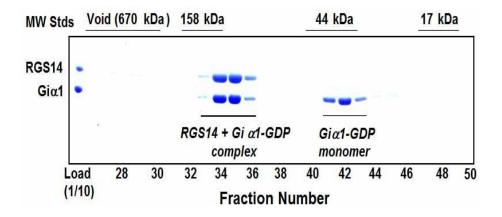
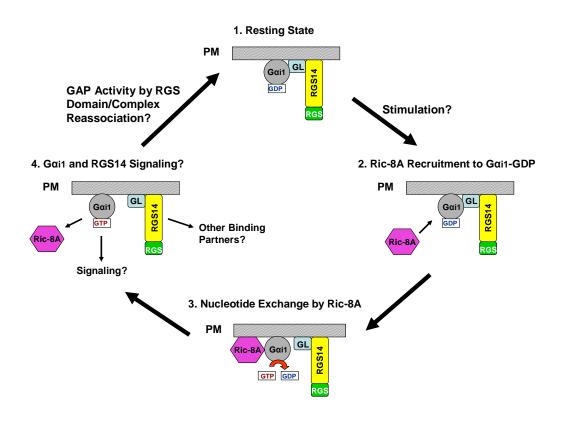


Fig. S1. RGS14 forms a stable complex with Gai1-GDP in vitro.  $\Delta$ RGS14 forms a stable heterodimeric complex with Gai1-GDP. Purified His6-Gai1-GDP was incubated in excess with pure TxHis6- $\Delta$ RGS14 for 1.5 hours at 4°C and then subjected to size-exclusion gel filtration using tandem S75 + S200 Superdex columns. Elution fractions were collected, subjected to SDS-PAGE, and proteins stained with Coomassie Blue. This complex was used in experiments done for Figure 3.

## **Supplemental Figure 2**



**Fig. S2.** Working model depicting Ric-8A regulation of the RGS14:Gai1-GDP complex. This visual model includes RGS14, Gai1, Ric-8A, and reference to speculative RGS14 binding partners localized at or near the plasma membrane (PM). Both the GoLoco (GL) and RGS (RGS) domains of RGS14 are shown. The cycle begins at the "Resting State" and proceeds clockwise in the direction of the large bold and black arrows.