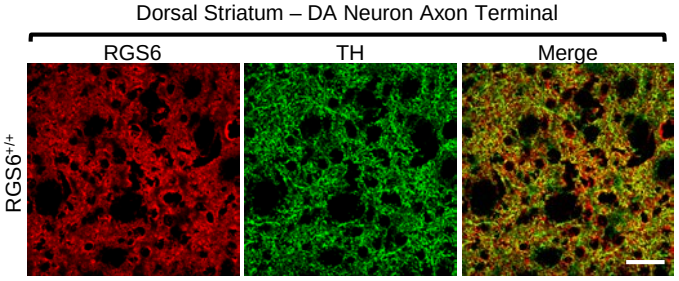
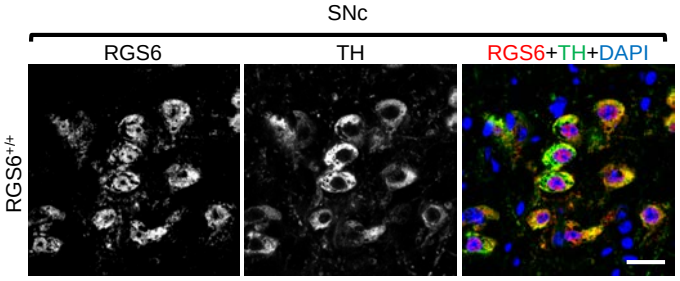
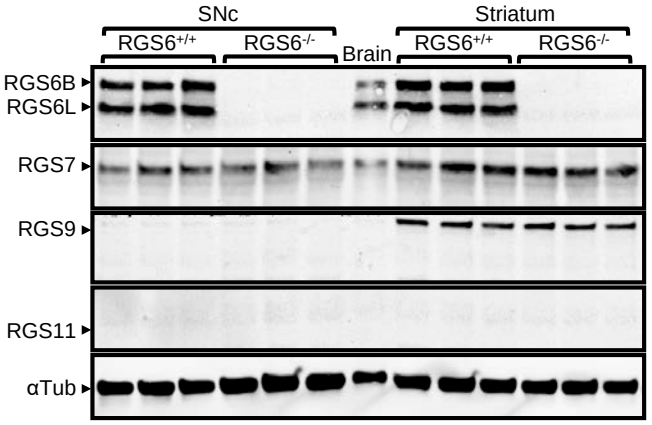


Supplementary Figure 1: Immunofluorescent analysis reveals co-localization of RGS6 and TH in DA neuron synaptic terminals in the mouse dorsal striatum. Immunofluorescent staining reveals that RGS6 is not only expressed in SNc DA neuron cell bodies **(Fig. 1)** but also in TH-expressing synaptic terminals present in the dorsal striatum. Scale bar represents 25µm.



Supplementary Figure 2: Intracellular localization of RGS6 in mouse SNc DA neurons. Immunofluorescent staining for RGS6 and TH in mouse SNc shows strong localization of RGS6 at the plasma membrane/cytoplasm as well as some expression in the nucleus. Scale bar represents 25 µm.



Supplementary Figure 3: RGS6 deficiency does not alter the expression of other members of the R7 subfamily in the mouse SNc or striatum. Western blot analysis of the expression of RGS6, RGS7, RGS9 and RGS11 in the SNc and striatum of 3mo RGS6$^{+/+}$ and RGS6$^{-/-}$ mice. Whole brain lysate served as a control.