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Perturbation of Synapsin Homeostasis through HIV-1 Tat-Mediated Suppression of BAG3 in Primary Neuronal Cells

SUPPLEMENTARY MATERIALS

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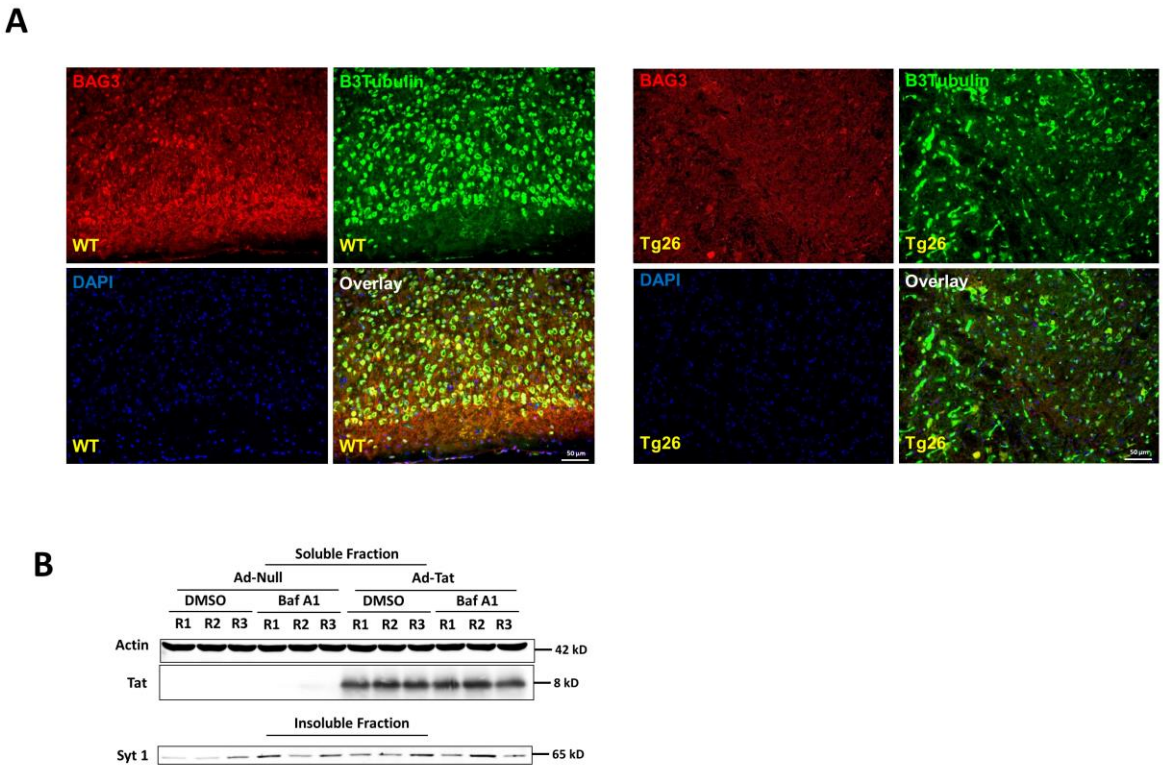

Fig S1: A. Immunohistochemistry images indicate BAG3 downregulation in the brain slices from Tg26 mice. **B.** Ad-Tat transduction of primary neurons causes accumulation of Syt1 in insoluble neuronal proteins fraction.

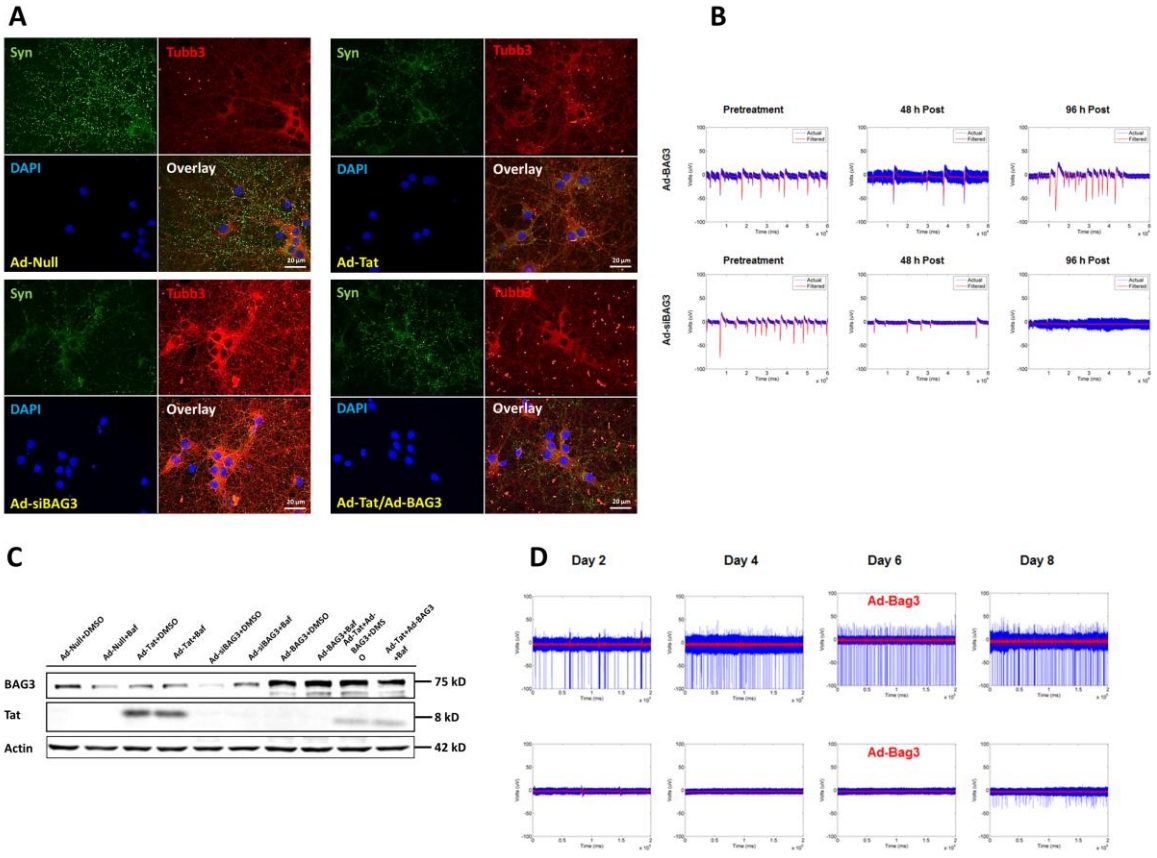

Figure S2: BAG3 overexpression partially restores synaptic vesicles distribution and neuronal activity. A. BAG3 overexpression restores the impairing effect of HIV-1 Tat on SVs distribution in immuncytochemical images as probed with synapsin antibody. **B.** BAG3 overexpression lowers Tat expression in neurons. **C and D.** BAG3 overexpression restores the neuronal activity as measured by microelectrode arrays.

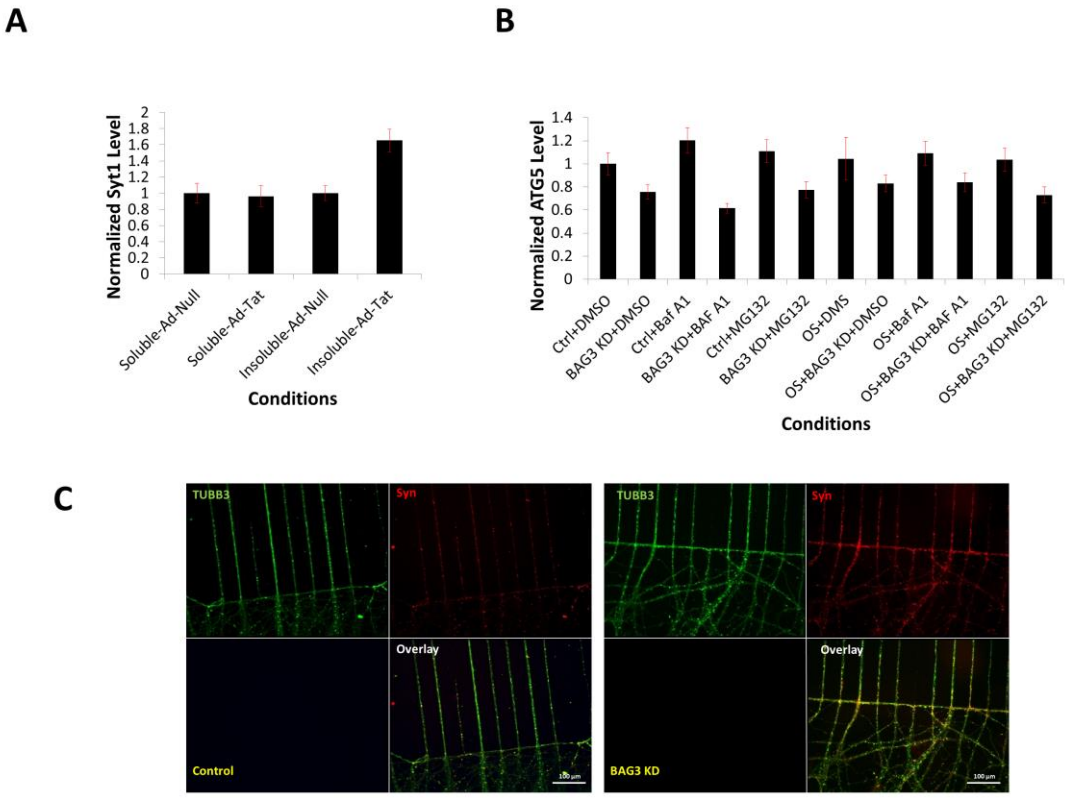

Figure S3: A. Syt1 protein levels in the insoluble fraction increased as a result of Tat expression in primary rat neurons. **B.** ATG5 protein levels in primary rat decreased under BAG3 KD in the presence and absence of protein degradation inhibitors and oxidative stress. **C.** BAG3 KD leads to the accumulation of synapsin along axon grown in microfluidic channels.