

Movie 1. CB1-eGFP axonal transport in a *KLC1*+/+ neuron. Representative live-cell movie of KLC1+/+ hippocampal neuron at DIV7-8 expressing the construct CB1R-eGFP showing the axonal transport of CB1R+ vesicles. Movie shows the time in seconds (8 frames/sec) and oriented so that right-to-left moving vesicles correspond to anterograde transport and left-to-right correspond to retrograde. Scale bar: 20  $\mu$ m.



**Movie 2. CB1-eGFP axonal transport in a** *KLC1*-/- **neuron.** Representative live-cell movie of KLC1-/- hippocampal neuron at DIV7-8 expressing the construct CB1R-eGFP showing the axonal transport of CB1R+ vesicles. Movie shows the time in seconds (8 frames/sec) and is oriented so that right-to-left moving vesicles correspond to anterograde transport and left-to-right correspond to retrograde. Scale bar: 20  $\mu$ m.



Movie 3. CB1-eGFP axonal transport in a KLC1-- neuron transfected with pcDNA-KLC1-Tap-

**Tag.** Representative live-cell movie of *KLC1*-/- hippocampal neuron at DIV7-8 expressing the construct CB1R-eGFP and pcDNA-KLC1-Tap-Tag showing the axonal transport of CB1R+ vesicles. Movie shows the time in seconds (8 frames/sec) and is oriented so that right-to-left moving vesicles correspond to anterograde transport and left-to-right correspond to retrograde. Scale bar: 20 μm.