

| | Percentage of anterograde | Percentage of retrograde | Percentage of stationary | Anterograde velocity ($\mu\text{m}/\text{sec}$), mean \pm SEM | Retrograde velocity ($\mu\text{m}/\text{sec}$), mean \pm SEM | Anterograde run length (μm) | Retrograde run length (μm) |
|---------------|---------------------------|--------------------------|--------------------------|-------------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------|-----------------------------------------|
| APP | 48.71 | 18.46 | 32.96 | 1.74 \pm 0.033 | 1.52 \pm 0.063 | 5.51 \pm 0.19 | 4.95 \pm 0.32 |
| BACE-1 | 55.57 | 17.93 | 26.48 | 2.1 \pm 0.061 | 1.76 \pm 0.074 | 8.18 \pm 0.44 | 5.16 \pm 0.35 |
| NPYss | 57.06 | 22.68 | 20.24 | 2.51 \pm 0.058 | 1.82 \pm 0.074 | 6.21 \pm 0.23 | 4.83 \pm 0.26 |
| Rab11 | 11.54 | 8.79 | 79.66 | 1.68 \pm 0.14 | 1.93 \pm 0.1 | 7.25 \pm 0.45 | 6.03 \pm 0.76 |
| Rab5 | 3.73 | 3.68 | 92.57 | 1.54 \pm 0.13 | 1.2 \pm .05 | 3.7 \pm 0.68 | 2.74 \pm 0.19 |

Supplementary Table 1: Transport kinetics of various cargoes in axons

~ 360 APP, 300 BACE-1, 890 NPYss, 55 Rab11 and 120 Rab5 particles from 2-3 separate cultures were analyzed to calculate percentage of frequencies, velocities and run length in axons.