Supplementary Figures

Supplementary Fig. 1 Sec3 localization. a) Representative images of immunofluorescence showing the distribution of Sec3 (red) in neurons transfected with Sec3FL (green) of hippocampal pyramidal neurons in culture at stage 2 after 12 H.I.V. Note the significant colocalization of Sec3FL and total Sec3 as revealed by the Sec3 antibody. b) Representative images of double immunofluorescence micrographs showing the localization of Sec3 (red) or Tyr Tubulin (green) in hippocampal pyramidal neurons in culture at late stage 2 after 18 H.I.V. A magnification of the axon is shown (left). c) Cytofluogram showing pixel distribution profiles of Sec3 (red channel) or and TyrTub (green channel). d) Quantitative analysis of co-expression levels by Pearson’s colocalization coefficient, Manders colocalization coefficient and Fractionary Mander’s coefficient is expressed indicating Sec3 that colocalizes with Tyr Tubulin using JACoP, ImageJ. Bars represent mean ± SEM of the coefficient. n = 3 independent cultures. At least 15 cells were scored for each coefficient measure. e) Representative images of micrographs showing hippocampal neurons in stage 3 co-transfected with Sec3FL (green) and Sec3 shRNA (red).
**Supplementary Fig. 2** *Full length gels.* a) *Western Blot* of hippocampal cell lysates harvested at 12, 24, 36, or 72 H.I.V showing the expression of Sec3 (left, arrow apparent molecular weight 102 kDa) and tubulin (right, arrow apparent molecular weight 52 kDa) and secondary antibodies suitable for near infrared fluorescence. The obtained images were converted to grey scale and inverted. b) *Western Blot* of total 18-day rat embryo brain homogenate (first column), low Speed Supernatant (LSS, second column), Fraction A (FA, third column) and GCPs (last column) showing the expression of Sec3 (left, arrow apparent molecular weight 102 kDa) and tubulin (right, arrow apparent molecular weight 52 kDa) and secondary antibodies suitable for near infrared fluorescence. The obtained images were converted to grey scale and inverted. c) *Western Blot* of mouse Neuro-2a harvested at 24 H.I.V showing protein levels in culture in the presence of different Sec3-targeted shRNA (left, arrow apparent molecular weight 102 kDa) and tubulin (right, arrow apparent molecular weight 52 kDa) and secondary antibodies suitable for near infrared fluorescence. The obtained images were converted to grey scale and inverted.
