**Supplementary Figure 1:** (A-C) Laser capture micro-dissection (LCM) was employed to isolate endothelial cells identified by vWF immunostaining from WT mice brain tissue sections. (D) MiR-126 expression in significantly higher in brain endothelial cells (BECs) compared to brain tissue consisting of a mixture of endogenous brain cell types in WT mice. (E) PCR data showing that miR-126 expression is significantly decreased in endothelial cells isolated from miR-126<sup>EC-/-</sup> mice brain compared to miR-126<sup>flox/flox</sup> mice brain sections.

