Supplementary Methods

Laser Capture Microdissection (LCM)

For LCM, frozen brain sections (8 µm) were placed on Zeiss Membrane Slides 1.0 PEN, fixed with methanol for 10 min (-20 °C), washed with ddH_2O. Capillaries were visualized with *Ricinus communis* agglutinin DyLight594 (Vector Laboratories, Burlingame, USA) for 2 min. After washing with ddH_2O, the sample was dehydrated (1 min 70%, 1 min 90%, 3 min 96%, 5 min 100% ethanol) and brain sections were immediately subjected to LCM. The microvessels were dissected using a PALM MicroBeam (Zeiss) and catapulted into Adhesive Caps 500 opaque (Zeiss).

Quantitative real-time polymerase chain reaction

RNA was isolated from isolated brain capillaries or after LCM[1] using a GeneMATRIX Universal RNA purification kit (EURx, Gdansk, Poland), and cDNA was synthesized with the Maxima First Strand cDNA syntheses kit (ThermoFisher Scientific), following manufacturer's guidelines. Quantitative real-time PCR was performed with StepOne RT-PCR system, 48/96 well (Life Technologies) using Luminaris Color HiGreen high ROX qPCR master mix (ThermoFisher Scientific). Primer pairs (Table S1; BioTeZ, Berlin, Germany) were designed according to http://primer3plus.com and tested for specificity. The cycle threshold (Ct) was normalized to that of β-actin (Actb) or 28S ribosomal RNA by calculating $\Delta Ct=(Ct_{target\ protein}-Ct_{Actb\ or\ Rn28S})$.

1 Berndt P, Winkler L, Cording J, et al. Tight junction proteins at the blood-brain barrier: far more than claudin-5. *Cell Mol Life Sci* 2019; 76: 1987-2002.