SUPPLEMENTARY FIGURES:

Figure S1. Diagram of self made hypoxia chamber.

Figure S2. Hypoxia does not induce cell death in AEC. Polarized AEC were exposed to normoxia or hypoxia for 60 minutes and 100% ethanol (5 minutes) as positive control. Graph represents means with dots representing individual experiments. (n=4 independent experiments in triplicates).

Figure S3. Effect of ebselen and adenoviral vectors in AEC *Gt* and occludin abundance at the plasma membrane in AEC. Polarized AEC were either pretreated for 30 minutes with Ebselen (20 μM) or infected with adenovirus vectors containing empty virus, Catalase, SOD1 and SOD2 twenty four hours before measurements. **A** Surface biotinylation was performed on AEC and plasma membrane occludin abundance was determined by WB analysis. E-cadherin was used as loading control for each experiment **B.** *Gt* was measured at 30 and 60 minutes after either pre-incubation (ebselen or adenovirus)**.** (n=6 independent experiments in triplicates)**.** Polarized AEC were infected with empty adenovirus vector twenty four hours before treatments. **C.** AEC were exposed to normoxia or hypoxia for 30 minutes. Surface biotinylation was performed and occludin abundance was determined by WB analysis. E-cadherin was used as loading control for each experiment. Shown are representative blots. Graph represents means with dots representing individual experiments. (n=3 independent experiments in triplicates). ** $p<0.01$ when compared to control. (Control separated with a white line belongs to the same blot. This blot had to be spliced due to the fact that in the original blot they were three other conditions between CT and adenoviruses (Empty)).

Figure S4. Neither pharmacological inhibitor (Okadaic Acid, Bisindolylmaleimide or PKC-ζ pseudosubstrate) increase *Gt* nor decrease occludin abundance at the plasma membrane in AEC. Polarized AEC were either pretreated for 30 minutes with Bisindolylmaleimide (10μM) or PKC-ζ pseudosubstrate (0.1μM), or pretreated for 15 minutes with Okadaic Acid (5nM) before measurements. **A.** Surface biotinylation was performed on AEC and plasma membrane occludin abundance was determined by WB analysis. E-cadherin was used as loading control for each experiment. (n=3 independent experiments in triplicates). **B.** *Gt* was measured at 30 and 60 minutes after each pre-incubation. (n=5 independent experiments in triplicates). Shown are representative blots. Graph represents means with dots representing individual experiments.

Figure S5. Total protein abundance of Occludin, PKC-ζ and PP2A. Polarized AEC were exposed to normoxia or hypoxia for 30 and 60 minutes. Cell lysate was obtained and total protein abundance of Occludin, PKC-ζ or PP2A was determined by WB analysis. Beta-actin was used as loading control. Graph represents means with dots representing individual experiments. (n=3 independent experiments in triplicates).