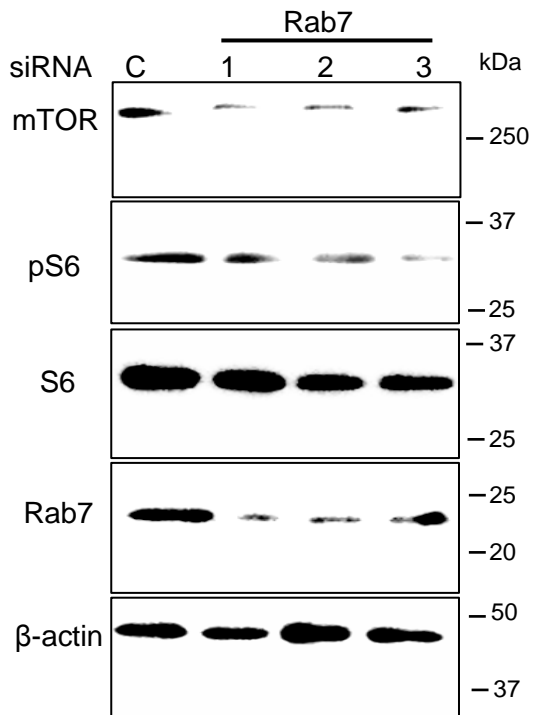
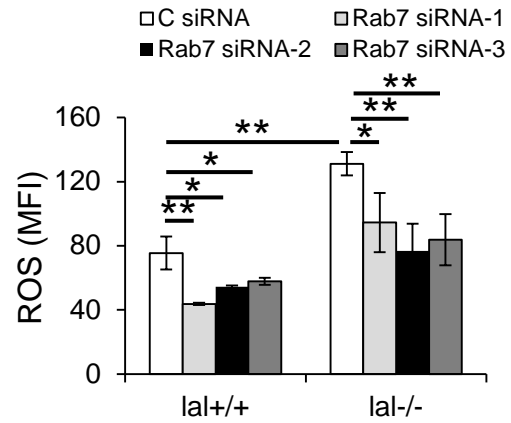


Supplementary Figure 1

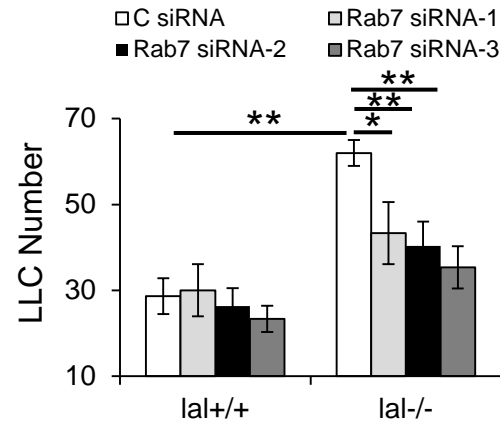
A



B



C



Supplementary Figure 1. Inhibition of Rab7 GTPase influenced mTOR downstream signaling, decreased ROS over-production, and impaired *lal*^{-/-} ECs' permeability. *lal*^{+/+} or *lal*^{-/-} ECs were transfected with control siRNA or 3 distinct siRNAs against Rab7 GTPase. (A) Rab7 GTPase siRNA knockdown reduced mTOR, phosphorylated S6, and Rab7 GTPase protein levels in *lal*^{-/-} ECs by Western blot analysis. (B) Statistical analysis of mean fluorescent intensity (MFI) of the ROS level in ECs after Rab7 GTPase siRNA knockdown by flow cytometry. (C) LLC cell transendothelial migration was determined after Rab7 GTPase siRNA knockdown in ECs.

Supplementary Table 1. Rabs mRNA expression in ECs

Gene	Δ CT of <i>lal^{+/+}</i> ECs	Δ CT of <i>lal^{-/-}</i> ECs	Fold change
<i>Rab1b</i>	7.26 \pm 2.43	6.68 \pm 2.51	1.57 \pm 1.52
<i>Rab3d</i>	9.94 \pm 2.93	9.63 \pm 3.47	1.56 \pm 0.98
<i>Rab4b</i>	4.58 \pm 0.79	3.96 \pm 0.71	1.51 \pm 0.47
<i>Rab5b</i>	3.85 \pm 1.08	3.96 \pm 1.15	1.45 \pm 0.68
<i>Rab5c</i>	7.33 \pm 2.05	6.54 \pm 2.10	1.85 \pm 1.41
<i>Rab6a</i>	7.21 \pm 0.98	6.84 \pm 1.30	1.46 \pm 0.78
<i>Rab7</i>	3.95 \pm 0.45	2.98 \pm 0.62	2.05 \pm 0.52
<i>Rab11a</i>	-0.39 \pm 3.82	-0.92 \pm 4.00	1.77 \pm 1.52
<i>Rab11b</i>	4.24 \pm 0.53	4.42 \pm 0.55	0.88 \pm 0.38
<i>Rab18</i>	6.91 \pm 2.14	6.04 \pm 1.69	1.54 \pm 2.24
<i>Rab22a</i>	4.34 \pm 1.94	3.81 \pm 2.16	1.75 \pm 1.09
<i>Rab23</i>	9.05 \pm 1.47	8.50 \pm 1.72	1.60 \pm 0.79
<i>Rab24</i>	3.67 \pm 1.18	3.20 \pm 1.20	1.40 \pm 0.58
<i>Rab28</i>	6.16 \pm 0.68	5.85 \pm 1.00	1.40 \pm 0.70
<i>Rab31</i>	6.08 \pm 0.96	5.36 \pm 0.95	1.63 \pm 0.66
<i>Rab32</i>	4.32 \pm 1.27	3.86 \pm 1.07	1.31 \pm 0.81
<i>Rab35</i>	8.10 \pm 1.54	7.79 \pm 1.75	1.36 \pm 0.25
<i>Rab37</i>	6.68 \pm 3.50	6.51 \pm 4.32	1.39 \pm 0.96

Real-Time PCR analyses of Rab mRNA expression in *lal^{+/+}* and *lal^{-/-}* ECs. The housekeeping gene β -Actin was used as an internal control. Results are expressed as mean \pm SD, n = 6.