Increased ocular levels of microRNA-148a in cases of retinal detachment promote epithelial–mesenchymal transition

Kei Takayama,1) Hiroki Kaneko,1) Shiang-Jyi Hwang,1)2) Fuxiang Ye,1)3) Akiko Higuchi,1) Taichi Tsunekawa,1) Toshiyuki Matsuura,1) Takeshi Iwase,1) Tetsu Asami,1) Yasuki Ito,1) Shinji Ueno,1) Shunsuke Yasuda,1) Norie Nonobe,1) Hiroko Terasaki,1)

1)Department of Ophthalmology, Nagoya University Graduate School of Medicine; 2)Laboratory of Bell Research Center–Department of Obstetrics and Gynecology collaborative research, Nagoya University Graduate School of Medicine, Nagoya Japan; 3)Department of Ophthalmology, Ninth People’s Hospital, Shanghai Jiao Tong University School of Medicine
Supplementary Figure 1. Up-regulation of hsa-miR-148a-3p after transfection

After hsa-miR-148a-3p_mimic transfection, microRNA real-time quantitative PCR (qPCR) was performed (precise protocol is shown in the Methods section). hsa-miR-148a-3p expression was up-regulated in ARPE-19 cells transfected with hsa-miR-148_mimic (938.2 ± 113.0, n=3) compared to those transfected with microRNA_negative_control (miR_Ctrl; 1.07 ± 0.07, n = 3). Similarly, hsa-miR-148a-3p expression was up-regulated in human RPE (hRPE) cells
transfected with hsa-miR-148_mimic (51506.8 ± 7266.5, n=3) compared to those transfected with miR_Ctrl (1.02 ± 0.01, n = 3)
Supplementary Figure 2. Primary human RPE (hRPE) cell viability after hsa-miR148 transfection.

After hsa-miR-148a-3p_mimic transfection, proliferative activities of hRPE cells were evaluated with WST-1 colorimetric assay (Roche Diagnostics, Mannheim, Germany) following manufacturer's instructions.\(^1\) Proliferative activities of hRPE with hsa-miR-148a-3p_mimic (0.84 ± 0.04, n=10) did not show significant changes compared to that with miRNA_negative_control (miR_Ctrl; 1.00 ± 0.07, n = 10, P =0.082), N.S. = not significant.