Gap junction-mediated regulation of endothelial cellular stiffness

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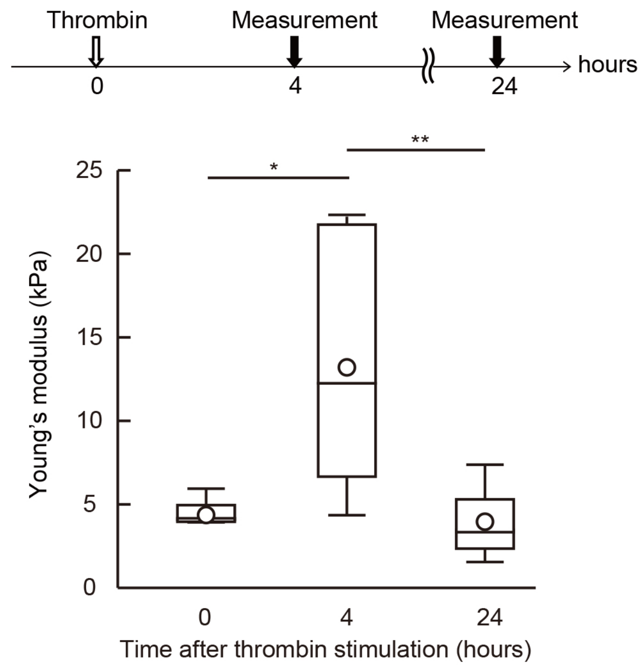
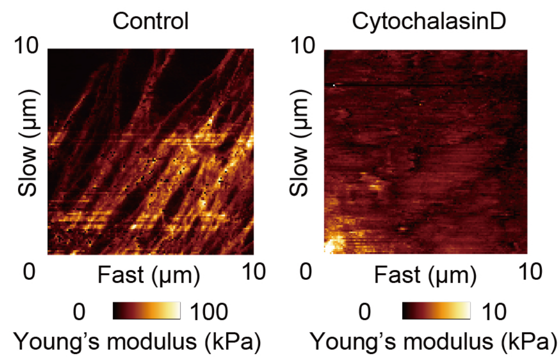
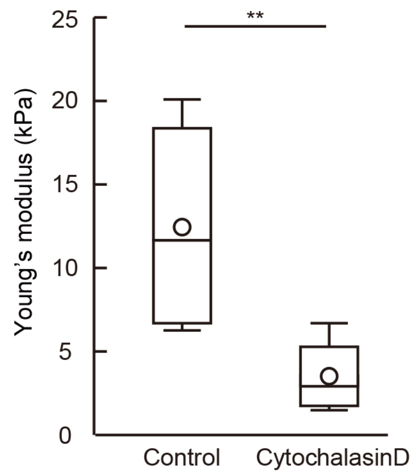
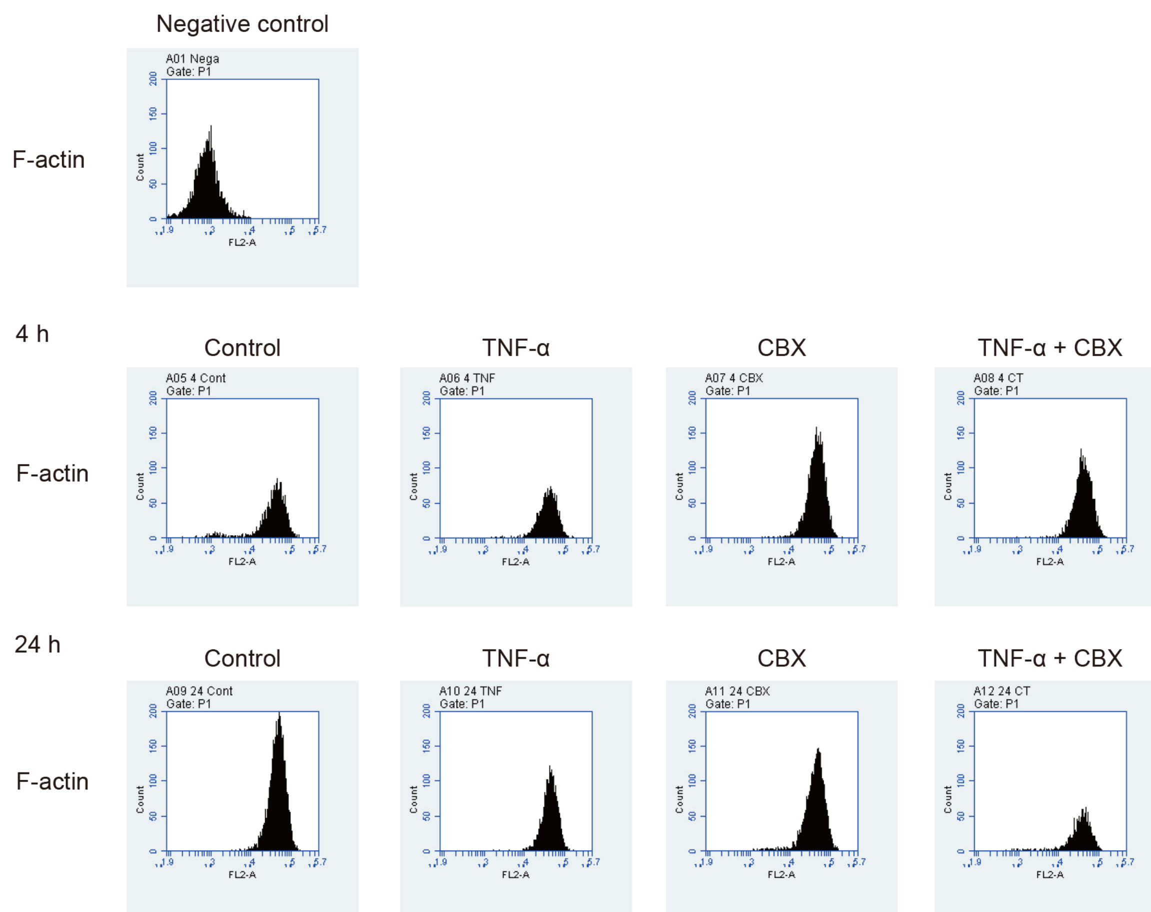


Supplementary Figure. 1. Pro-coagulant factor thrombin increased endothelial cellular stiffness. HUVECs were stimulated with thrombin and the force curve of the living cells was measured at the indicated time. The geometric means of Young's modulus of HUVECs was determined after thrombin stimulation for 0 (n=4), 4 (n=6), and 24 hours (n=8). *P< 0.05; **P< 0.01; measured using a Tukey's test. Representative data from three experiments are shown.





Supplementary Figure. 2. The heterogeneity of the cellular stiffness is dependent upon the cytoskeletal rearrangement. HUVECs were treated with 2μM of cytochalasin D for 1 hour. A Young's modulus of HUVECs was determined by AFM. Representative Young's modulus images of HUVECs were reconstructed. *P< 0.05; **P< 0.01; measured using a Student t-test. Representative data from three experiments are shown.



Supplementary Figure. 3. The amount of F-actin in HUVECs was quantified by flow cytometry. After TNF-α and/or CBX stimulation, HUVECs were fixed with 4% paraformaldehyde and stained by rhodamine-phalloidin. Samples were evaluated by a BD Biosciences Accuri C6 Personal Flow Cytometer. Fluorescence intensity of total F-actin content was identified for all samples. Ten thousand events were acquired for each sample. Results are displayed as histograms. Representative data from three experiments are shown.