

Figure S1: Examples of fluorescent images of a Hoechst-stained nucleus in the actin filament-disrupted vascular smooth muscle cells cultured on either the flat (A) or micro-grooved (B) collagen substrate during macroscopic substrate stretching. The actin filaments of the cells were completely disrupted by cytochalasin D ( $2 \mu\text{g/mL}$ , 1 h) just before stretching test. The stretch ratio of the cell body and nuclear length of the cells cultured on either the flat (C) or micro-grooved collagen (D) substrate.

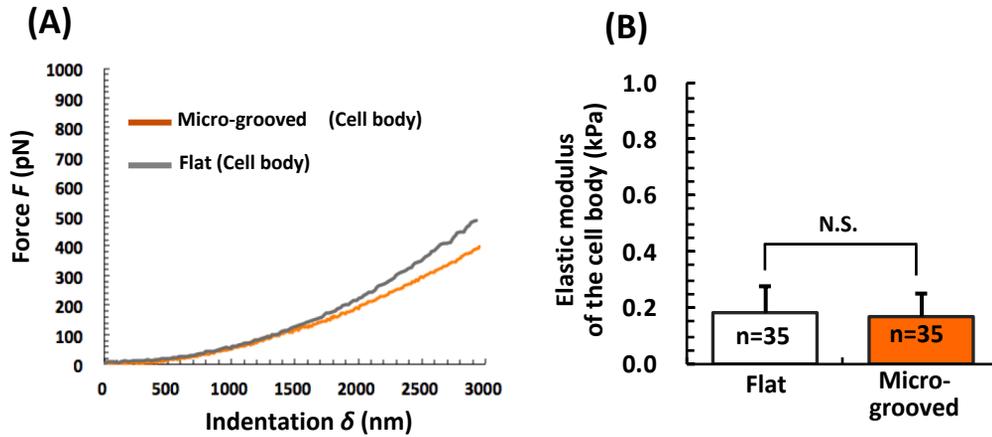


Figure S2: AFM force-indentation responses of nonnuclear region (cell body) of VSMCs following actin filament disruption with cytochalasin D ( $2 \mu\text{g/mL}$ , 1 h) (A) and elastic modulus of the cell body region (D). No significant difference was detected between in the cells cultured on the flat and micro-grooved collagen substrates.