Supplemental Material

Combined atomic force microscopy (AFM) and traction force microscopy (TFM) reveals a correlation between viscoelastic material properties and contractile prestress of living cells

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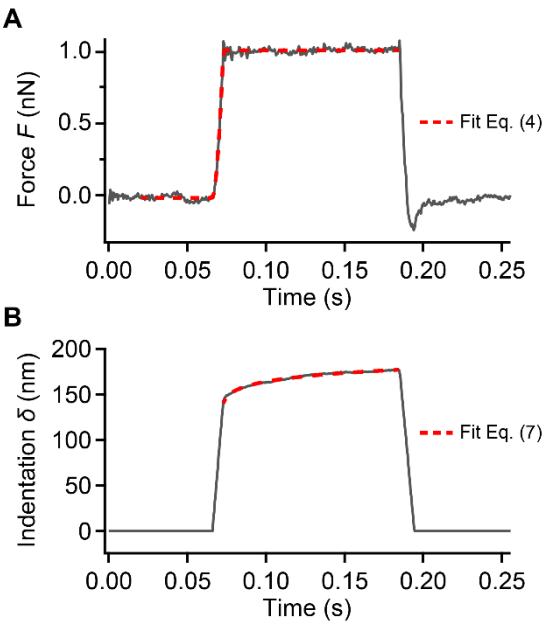

Fig. S1 | Force clamp force mapping (FCFM). (A) Force and **(B)** indentation vs. time during a force-distance measurement on the cell shown in Fig. 2 with fits of Equations (4) and (7), respectively, giving $E_0 = 6.0\,\mathrm{kPa}$ and $\beta = 0.081$.

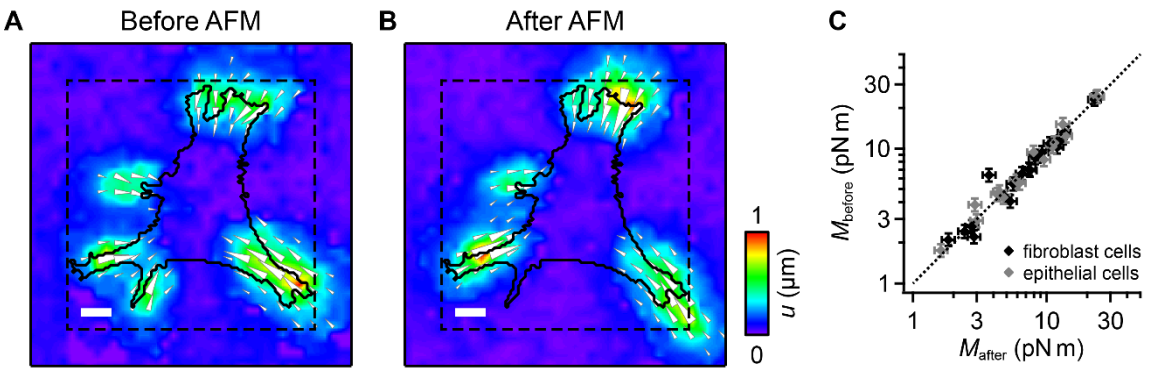

Fig. S2 | TFM displacement fields for the cell shown in Fig. 2. (A) Displacement field recorded before and **(B)** after the AFM measurement. **(C)** Net contractile moment measured before AFM vs. that measured after AFM for all cells of this study. The dotted line represents equality. The respective net contractile moment values match within 10% on average. The AFM scan area is indicated by a dashed box. Scale bar: $10\,\mu\mathrm{m}$.

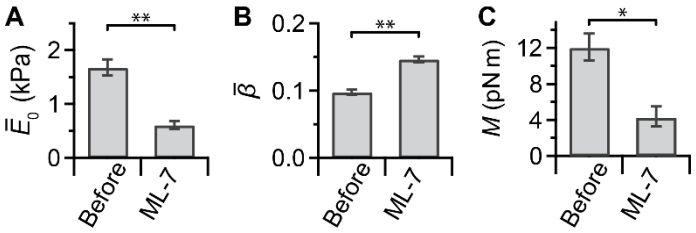

Fig. S3 | Influence of ML-7 treatment on viscoelastic material properties and contractile prestress. Population averages of stiffness, fluidity, and net contractile moment for $n = 3$ cells before and 15 min after addition of 10 μM ML-7. Error bars indicate standard errors.