

# Supplementary materials

## 1. Video descriptions

### Supplementary Movie 1

The movie acquired with the side-view optical microscopy module showing the real-time process of performing whole-cell compression on a living Raji cell using an AFM wedged parallel plate probe.

### Supplementary Movie 2

The movie acquired with the side-view optical microscopy module showing the real-time process of performing SCFS on a living C2C12 cell using an AFM wedged parallel plate probe carrying a C2C12 cell.

## 2. Supplementary figures

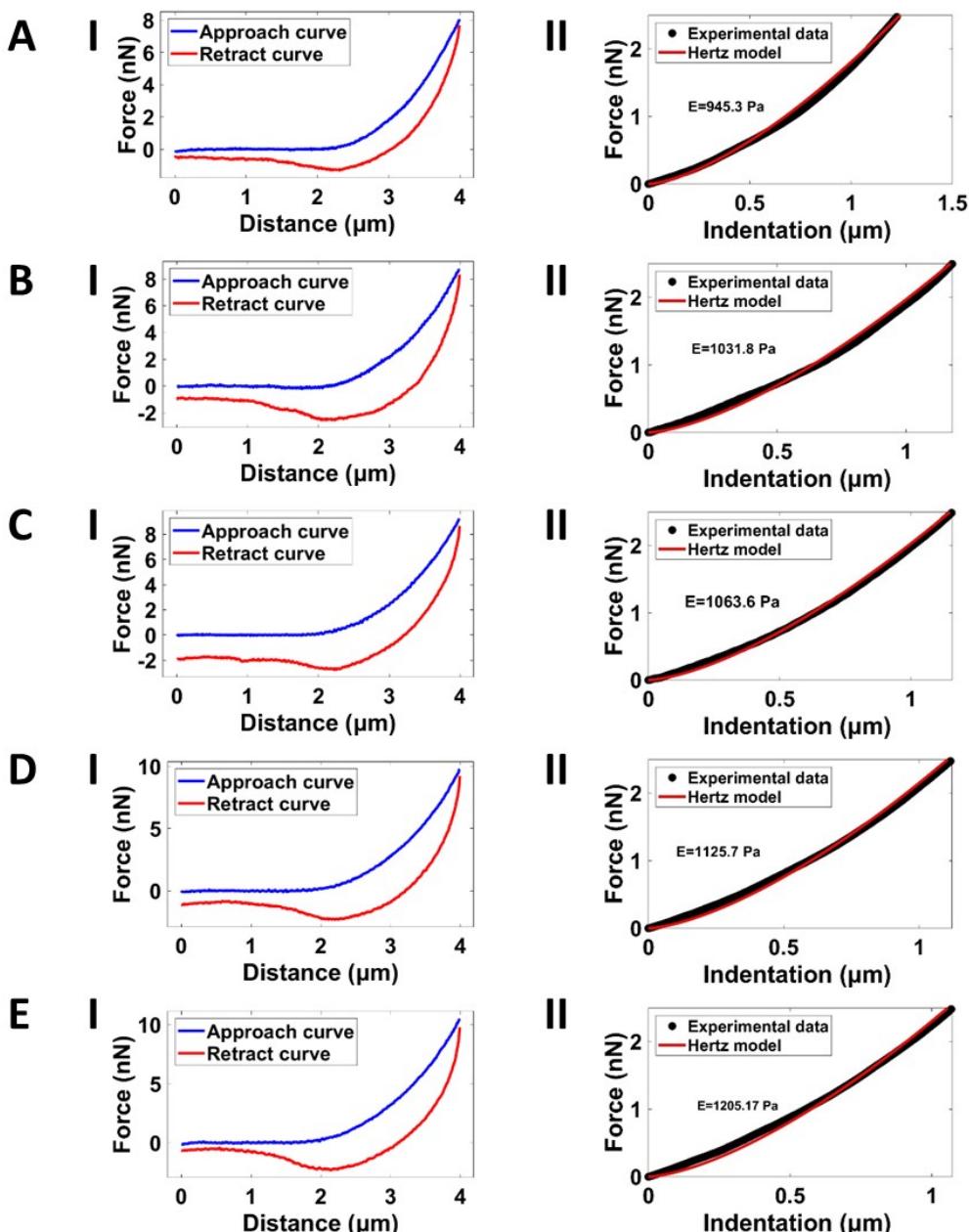


Figure S1 Force-distance curves obtained at different ramp rates on a regular Raji cell. These curves correspond to the force-distance curves in Fig. 2C(I). (A) The ramp rate was 1 Hz. (B) The ramp rate was 2 Hz. (C) The ramp rate was 3 Hz. (D) The ramp rate was 4 Hz. (E) The ramp rate was 5 Hz. (I, II) The force-distance curves (I) and the corresponding fitting results (II).

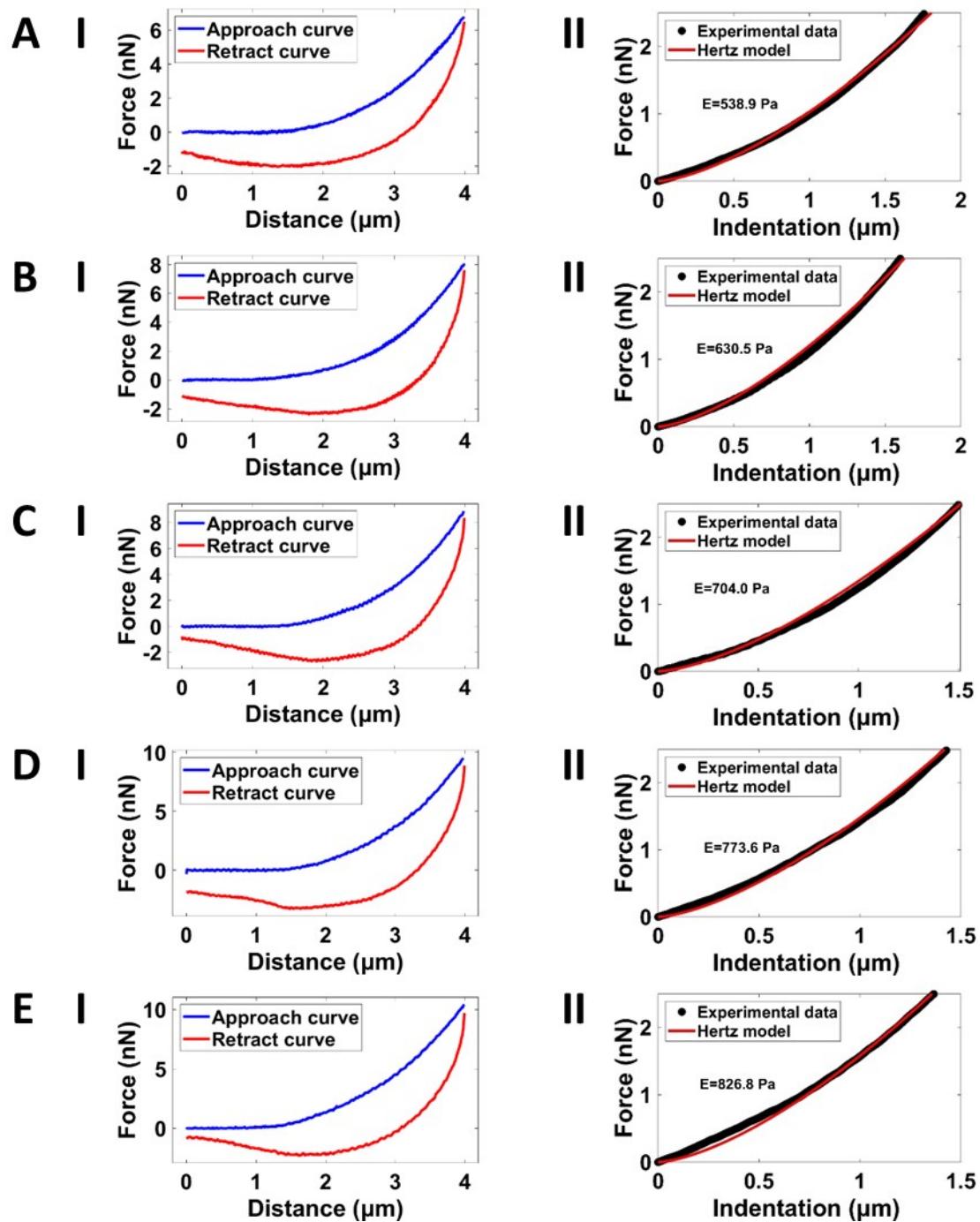


Figure S2 Force-distance curves obtained at different ramp rates on a cytochalasin B-treated Raji cell. These curves correspond to the force-distance curves in Fig. 2D(I). (A) The ramp rate was 1 Hz. (B) The ramp rate was 2 Hz. (C) The ramp rate was 3 Hz. (D) The ramp rate was 4 Hz. (E) The ramp rate was 5 Hz. (I, II) The force-distance curves (I) and the corresponding fitting results (II).