

## **Description of Additional Supplementary Files**

**Supplementary Movie 1** | Fallopian tube epithelial cells beating in 1 mPa·s, 50 mPa·s, 100 mPa·s, and 200 mPa·s culture media after 72 hours of culture. Videos were originally recorded at 200 frames per second, with a playback speed of 50 frames per second. Scale bars are 10  $\mu\text{m}$ .

**Supplementary Movie 2** | Fallopian tube epithelial cells cilia beating direction in 1 mPa·s and 200 mPa·s culture media. Videos were originally recorded at 200 frames per second, with a playback speed of 5 frames per second. Scale bars are 5  $\mu\text{m}$ .