Supporting Information

Kalson et al. 10.1073/pnas.1314348110

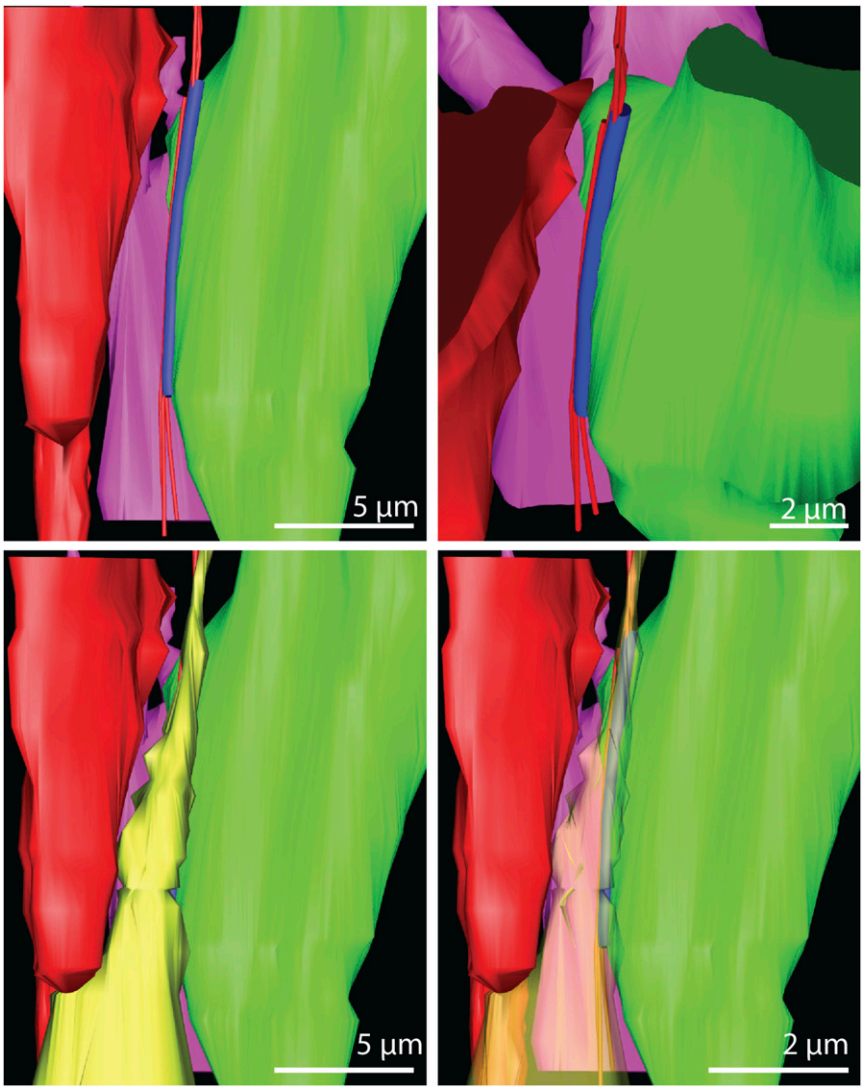


Fig. S1. Three-dimensional reconstruction of part of the surface of a cell showing a short collagen fibril (blue) in a bundle of longer collagen fibrils (red tubes). Cell membranes are shown in red, green, purple, and yellow. The images used to prepare the 3D reconstruction come from the dataset shown in Movie S1.

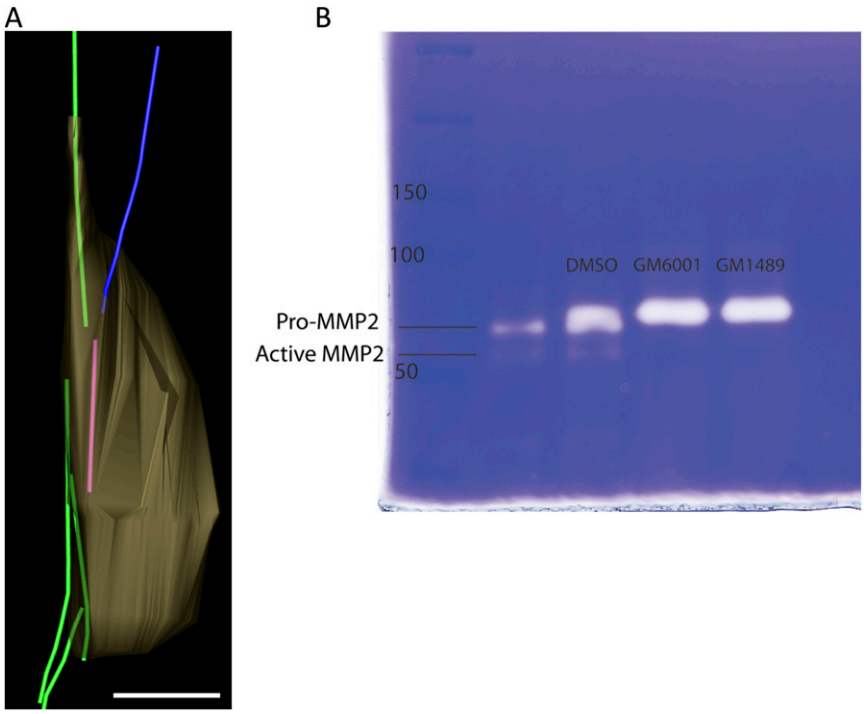
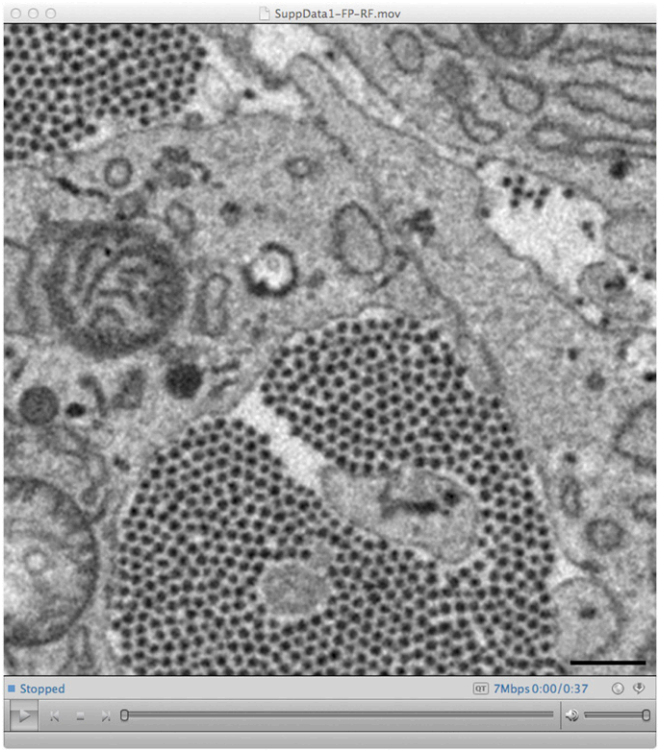
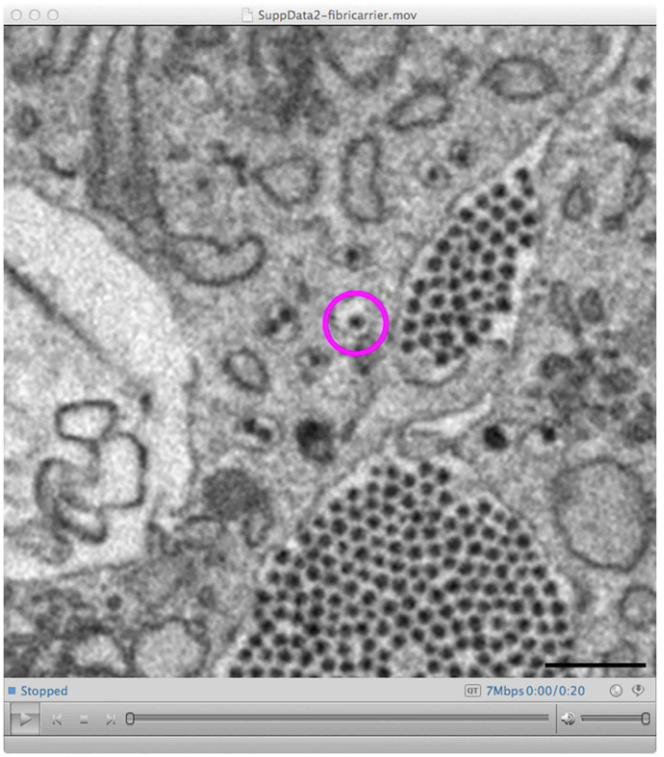


Fig. S2. (*A*) Three-dimensional reconstruction of a tendon cell treated with GM6001 shows the presence of short fibrils in protruding fibripositors (green), recessed fibripositors (blue), and fibricarriers (purple). (Scale bar: 5 μm.) (*B*) Gelatin zymography of cell media shows that addition of GM6001 or GM1489 to chick tendon fibroblasts prevented conversion of pro-MMP2 to active MMP2. DMSO was the vector for the inhibitors and was used here in control samples.



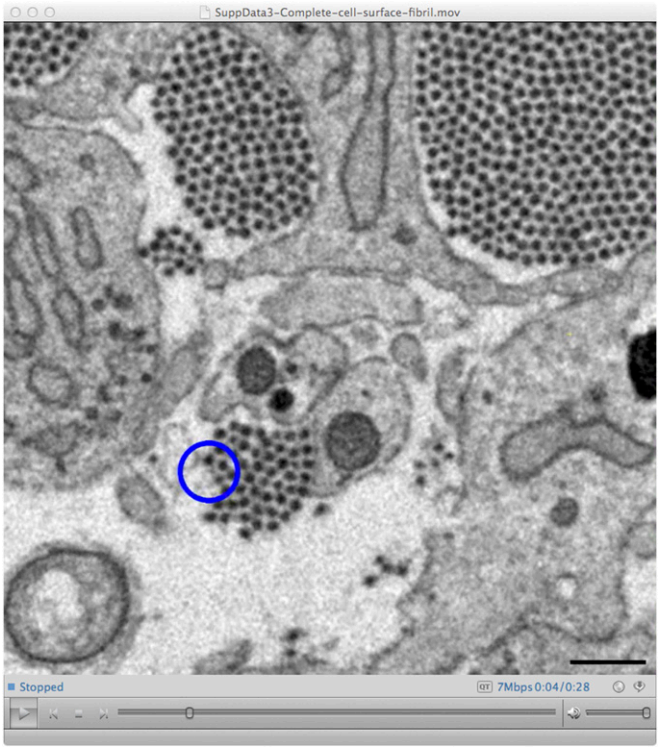
Movie S1. A fibril within a recessed fibripositor is highlighted with a blue circle. A fibril within a protruding fibripositor is highlighted with a green circle.

Movie S1



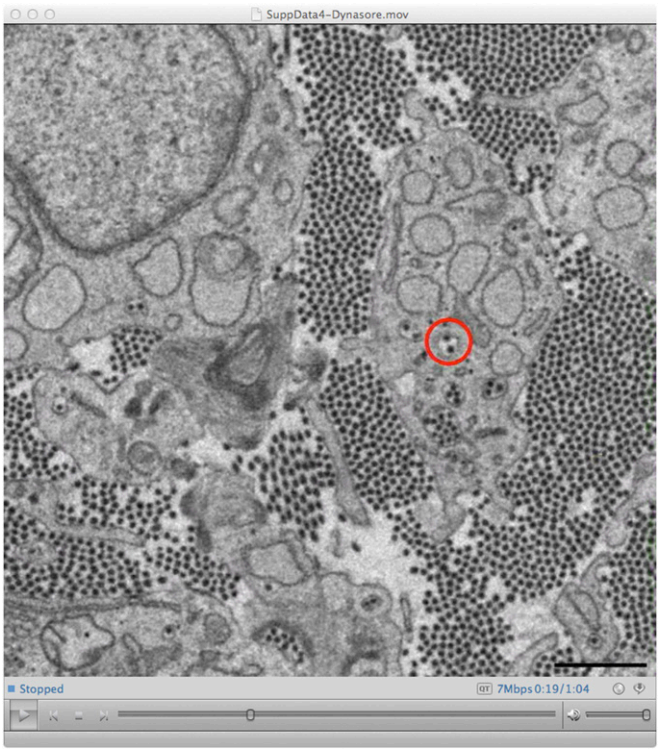
Movie S2. A fibril within a fibricarrier is highlighted with a purple circle.

Movie S2



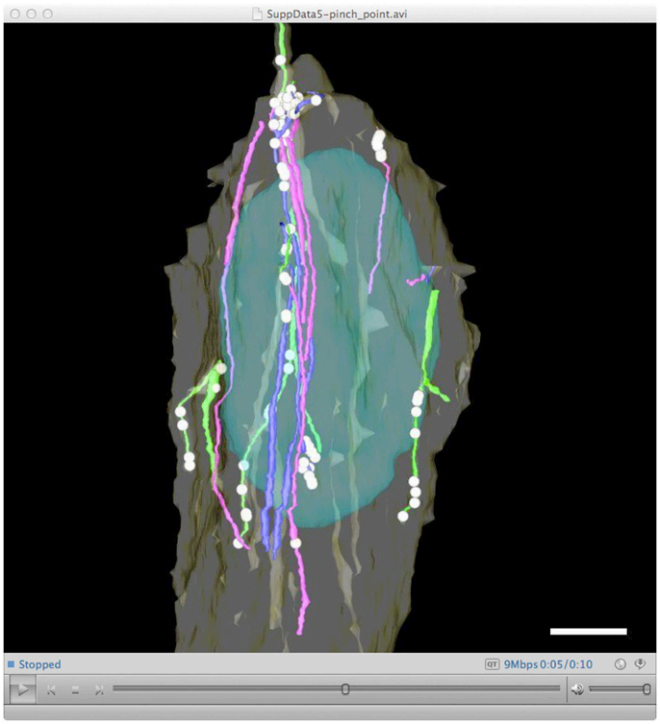
Movie S3. An entire collagen fibril at the cell surface is highlighted with a blue circle.

Movie S3



Movie S4. SBF-SEM images of embryonic chick tendon treated with dynasore demonstrated the appearance of intracellular fibril compartments containing increased numbers of fibrils. Examples of the internal components of two fibripositors looping through the cytoplasm are highlighted with a red circle. The protrusive component of a fibripositor is highlighted with a green circle.

Movie S4



Movie S5. Three-dimensional reconstruction of an embryonic fibroblast showing the location of pinch points within fibripositors. Cyan, nucleus; green, protruding fibripositors; blue, recessed fibripositors; purple, fibricarriers; white, pinch points.

Movie S5