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Supporting Material

Pivotal Role of Actin Depolymerization in the Regulation of Cochlear Outer Hair Cell Motility

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Supplemental Figure Legends

Fig S1: A - a, Stimulus protocol for electromotility analysis (top) and an example of recorded cell length during the pulse. Electromotility amplitude was measured as the difference of OHC length at $V_H = -145$ mV and $+50$ mV and the changes expressed as percentage of the OHC length at $V_H = -70$ mV. **b**, Electromotile amplitude in control condition. Points and vertical bars represent mean \pm SE from 4 cells. **B** - OHC length changes during repetitive electrical pulses in a representative cell. *Inset*, whole cell current in response to the repetitive electrical pulses given to this OHC. Traces corresponding to all the 18 pulses are superimposed. Note the perfect overlap without deterioration. **C** - Average OHC length during first 10 min of recording. Changes in length are expressed as a percentage of the OHC total length before membrane rupture. Mean \pm SE from 4 OHCs are expressed as points and vertical bars. *Inset*, OHC length during an entire recording in a representative cell. **D** - The “extraction analysis” used in the cell length during our stimulus protocol for OHC motility. After length and longitudinal area of the recorded image are obtained (a), the prestin-dependent (electromotility) and prestin-independent (slow motility) components are calculated (b) (21). Values are averages obtained from 8 OHCs.

Fig. S2: Antibody specificity. We performed pre-adsorption experiments to evaluate the specificity of the antibodies used in the present study. Primary antibodies were incubated overnight in blocking solution either alone or with specific blocking peptides (sc-8441P, sc-21867P, sc-8387P and sc-8389, respectively, (Santa Cruz Biotechnologies)), and the samples were processed following standard protocols with Alexa 488 (Green. Molecular Probes – Invitrogen) as secondary antibody. Rhodamine Phalloidine (red) and DAPI were used as auxiliary stains to individualize the cells.

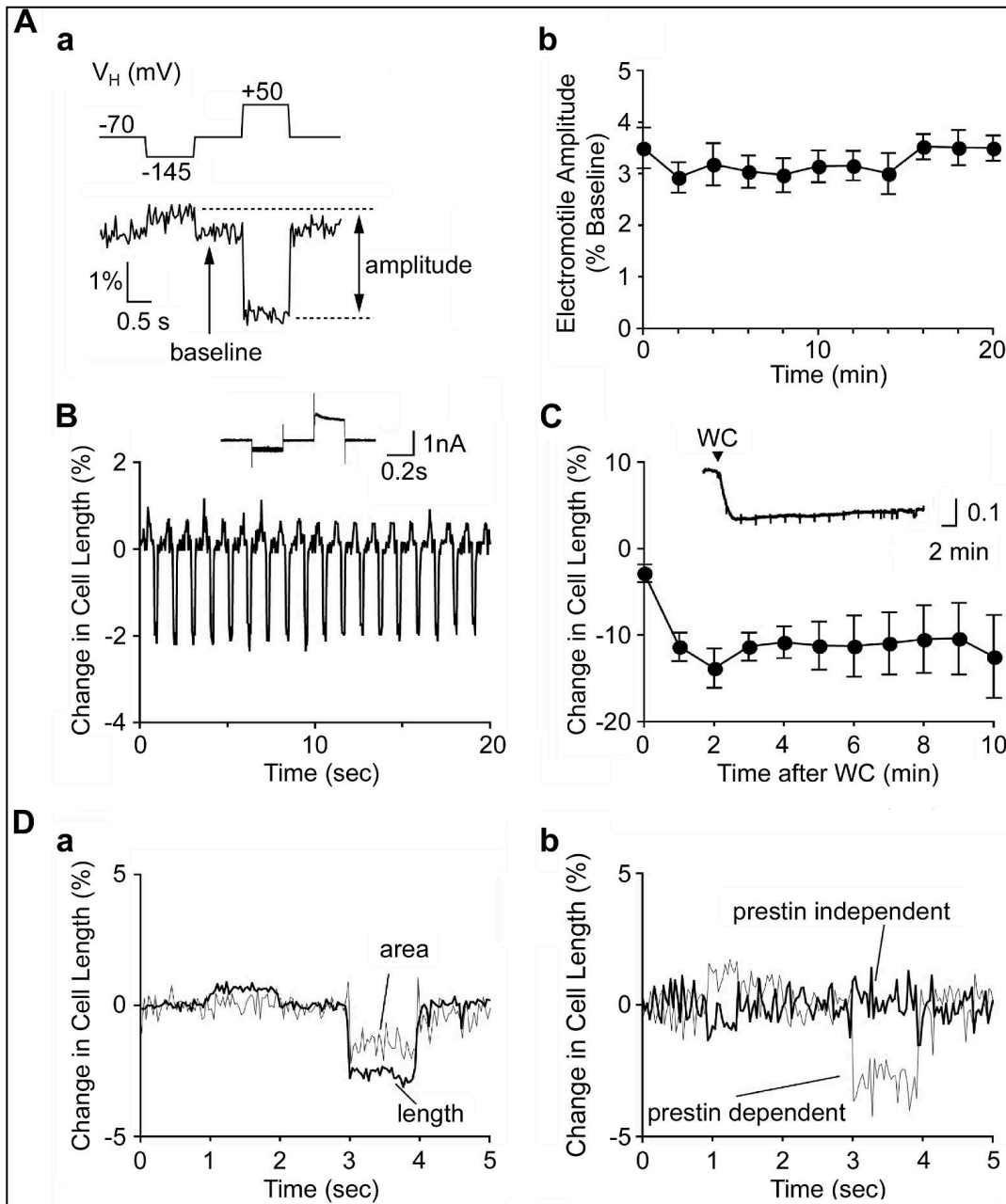


FIGURE S1

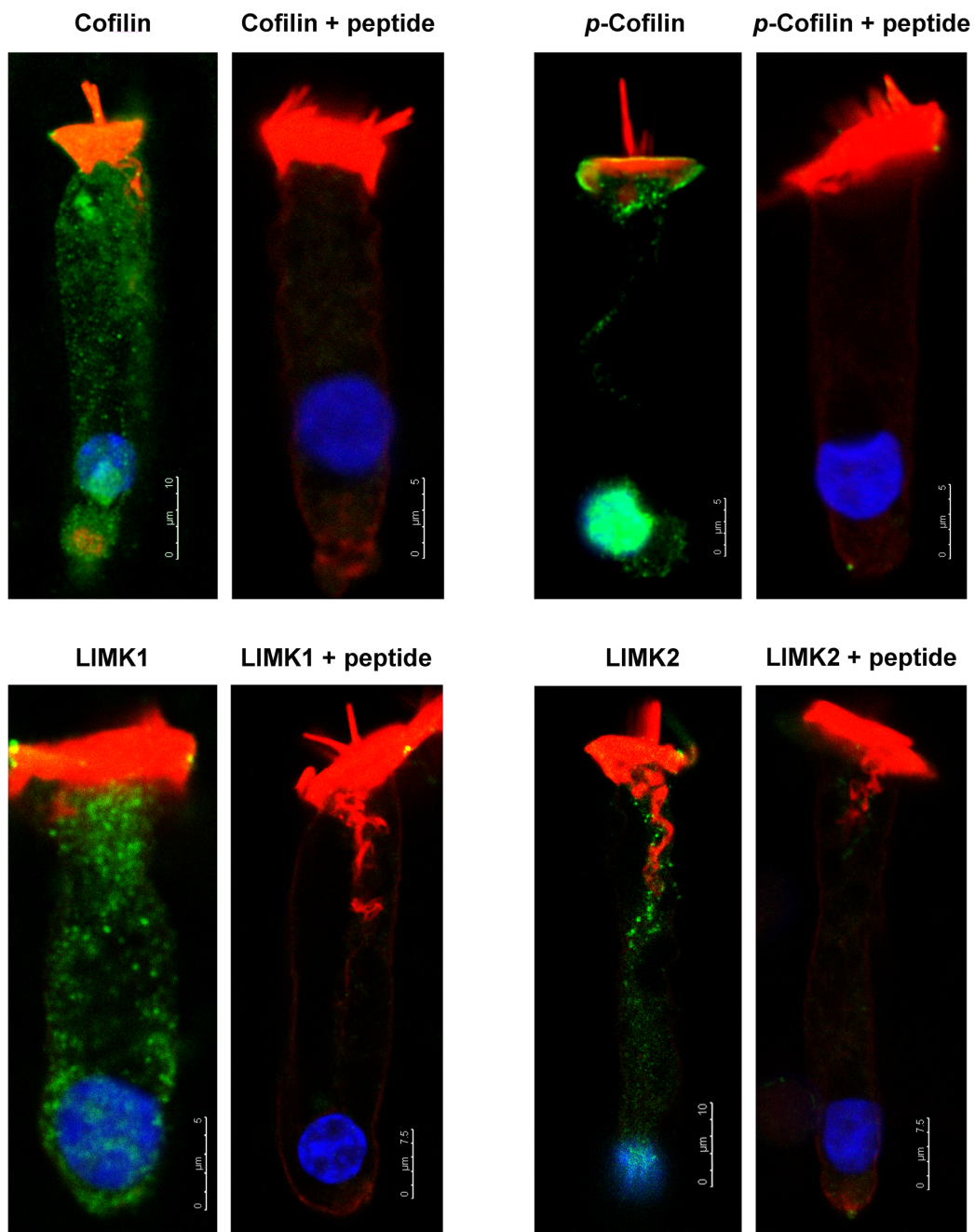


FIGURE S2