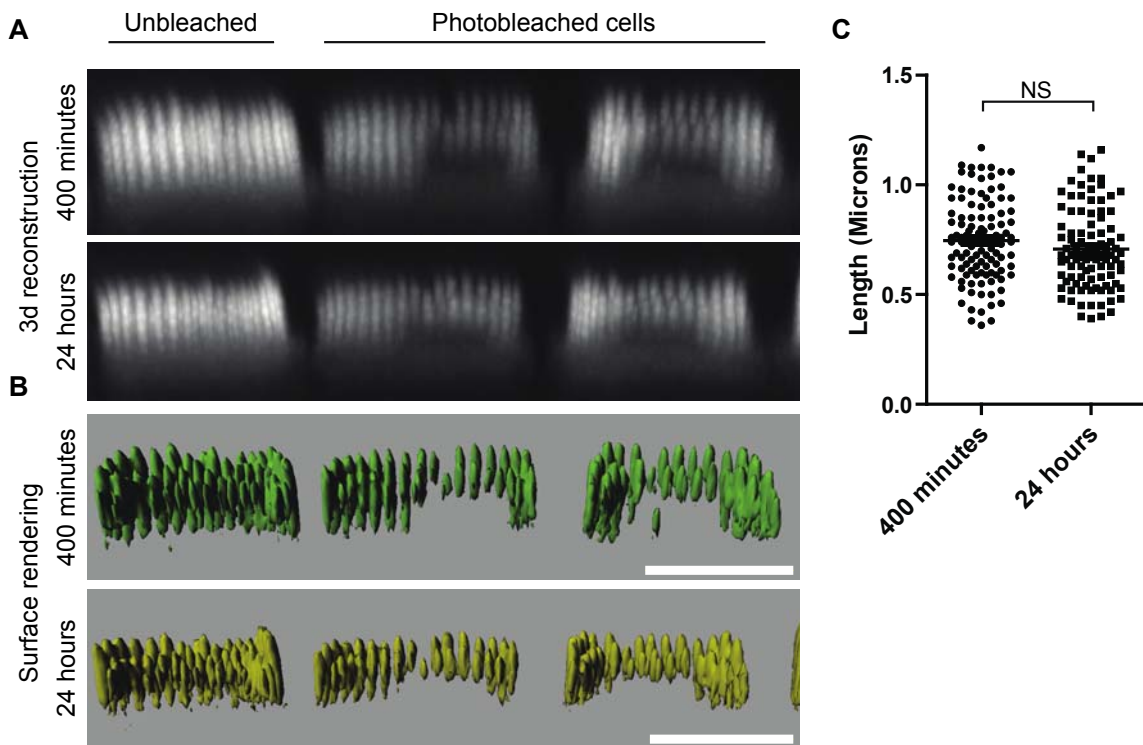


Figure S1

**Supplementary Figure 1: Expression and induction of  $\beta$ -actin-GFP transgene in hair cells.** a-d, Mosaic expression of the  $\beta$ -actin-GFP transgene in hair cells. Atoh1-Cre, constitutively expressed during hair cell development<sup>23</sup>, induced  $\beta$ -actin-GFP expression in a subset of hair cells in (a-b) the organ of Corti and (c-d)

the utricle. In the merged image,  $\beta$ -actin-GFP is green and phalloidin stained F-actin is red. **e-j**, Tamoxifen-inducible, ubiquitously expressed CreER induced expression of  $\beta$ -actin-GFP in hair cells. **e**, Organ of Corti.  $\beta$ -actin-GFP was not detected in mice expressing CreER but not dosed with tamoxifen. **f**, Seven days after tamoxifen administration at P21, mosaic  $\beta$ -actin-GFP expression was detected in IHCs and supporting cells, but not in OHCs. **g-j**, Utricular hair cells. There was sporadic expression of  $\beta$ -actin-GFP at P28 without tamoxifen treatment (**g,i**) and robust induction of  $\beta$ -actin-GFP 7 days after tamoxifen treatment at P21 (**h,j**). In the merged image,  $\beta$ -actin-GFP is green and phalloidin stained F-actin is red.



**Supplementary Figure 2:  $\beta$ -actin-GFP fluorescence recovery is limited to stereocilia tips.** **a,b**, Stacks of confocal images were used to generate 3D image reconstructions (**a**) and surface renderings (**b**) of photobleached IHC stereocilia after 400 minutes or 24 hours or recovery. **c** The size of the compartment that recovered  $\beta$ -actin-GFP fluorescence was measured in the surface renderings (n=109 and 98 stereocilia at 400 minutes and 24 hours, respectively). The length of the compartment did not increase between 400 minutes and 24 hours.