

**Figure S12.** Reduction of cortical actin and the emergence of long actin-rich filopodia (arrows) in M38K<sup>Opto-mFGFR1</sup> cells in response to blue light. (left) Unstimulated M38K<sup>Opto-mFGFR1</sup> cells. (right) M38K<sup>Opto-mFGFR1</sup> cells stimulated with blue light. Red: TRITC-phalloidin staining. Blue: DAPI staining. Cells were stimulated with blue light for 5 min every 15 min for 48 h. Light intensity was ~2.5  $\mu$ W/mm<sup>2</sup>. Scale bar: 20  $\mu$ m.