



**Figure S9.** Immunofluorescence microscopy of stable M38K<sup>Opto-mFGFR1</sup>, SPC212<sup>Opto-mFGFR1</sup> and hBE<sup>Opto-mFGFR1</sup> cells and HEK293 cells transiently transfected with Opto-mFGFR1, Opto-hEGFR and Opto-hRET reveals membrane localization of engineered receptors. Cells were fixed, stained with anti-HA antibody (red), mounted in medium containing DAPI (blue) and imaged using confocal microscopy. **Scale bar: 10  $\mu$ m.**