

**Description of Additional Supplementary Files:**

**Supplementary Movie 1. Labeling sites on  $\beta$ -tubulin.** Structure of  $\beta$ -tubulin (from pig – PDB: 5SYF) with Taxol. The main labeling site is highlighted in blue (Cys 356), and the minor labeling site in red (Cys 12).

**Supplementary Movie 2. STED timelapse of living dermal fibroblasts stained with 6-SiR-o-C<sub>9</sub>-CTX.** Live human dermal fibroblasts incubated with **6-SiR-o-C<sub>9</sub>-CTX** (1  $\mu$ M in OptiMEM) for 2h, washed three times with HBSS and imaged in DMEM+. A 500 sec timelapse was acquired (one frame per every 25 sec) with Abberior Facility Line. Scale bar = 20  $\mu$ m