# Supplemental Data

| Antibody | Manufacturer | Catalog # | Application |
|---|---|---|---|
| Ki67 | Abcam | ab15580 | IF |
| VwF | Abcam | ab6994 | IF |
| αSA | Sigma | a6811 | IF |
| PCNA | Abcam | AB29 | WB |
| CD3 | Abcam | ab16669 | IF |
| CD81 | Thermo | MA5-13548 | WB |
| Goat Anti-Mouse IgG H&L (Alexa Fluor® 488) | Abcam | ab150117 | IF |
| Goat Anti-Mouse IgG H&L (FITC) | Abcam | ab6785 | IF |
| Goat Anti-Rabbit IgG H&L (Texas Red ®) | Abcam | ab6719 | IF |
| Goat anti-Mouse HRP | Thermo | 31430 | WB |
| Goat anti-Rabbit HRP | Thermo | 31460 | WB |

**Table S1.** List of all antibodies used in this study and their application.

# Methods

## Peptide to Exosome Labelling Ratio

Assuming an exosome radius of 90nm the surface area of a single exosome can be calculated

$$r_{XO} = 90 \text{ nm}$$

$$A_{surface} = 4\,\pi\,r^2$$

$$A_{XO\ Surface} = 101788 \text{ nm}^2$$

In addition, the length of a peptide bond can be assumed as follows to give a predicted length of the CHP peptide as

$$l_{peptide\ bond} = 3.5 \text{ Å or } 0.35 \text{ nm}$$

$$l_{CHP} = 9 \cdot l_{peptide\ bond}$$

Assuming that the peptide occupies a circular shaped area, the maximum amount of space that can be occupied is calculated using the maximum hexagonal packing efficiency

$$\eta_{hexagonal} = \frac{1}{6}\sqrt{3}\,\pi$$

$$A_{packed} = A_{XO} \cdot \eta_{hexagonal}$$

Finally, it can be assumed that the peptide will only rarely be tangential to the surface of the exosome, but likely in a near vertical position. To account for this, the occupied radius is

$$r_{CHP} = \frac{l_{CHP}}{\sqrt{2}}$$

$$A_{single\ peptide} = {r_{CHP}}^2 \cdot \pi$$

$$n_{peptides\ per\ XO} = \frac{A_{packed}}{A_{single\ peptide}} = 5922.61 \approx 6000$$

# Supplemental Figures

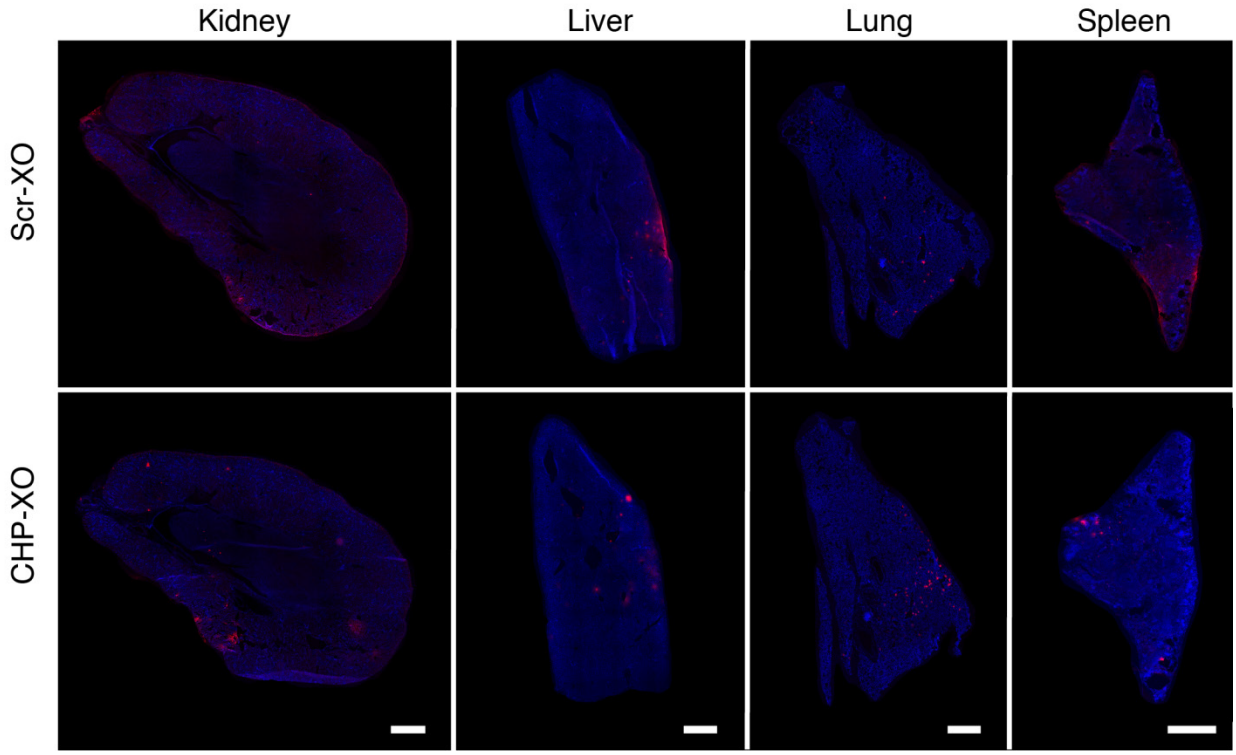


**Figure S1. *Ex vivo* analysis of other organs.** Additional images of organs analyzed for the ex vivo targeting assay (kidney n=4, liver n=4, lung n=3, spleen n=5). Scale bar=1 mm.