SUPPORTING INFORMATION

Evaluation of a Centyrin-based Near-infrared Probe for Fluorescence-Guided Surgery of Epidermal Growth Factor Receptor Positive Tumors

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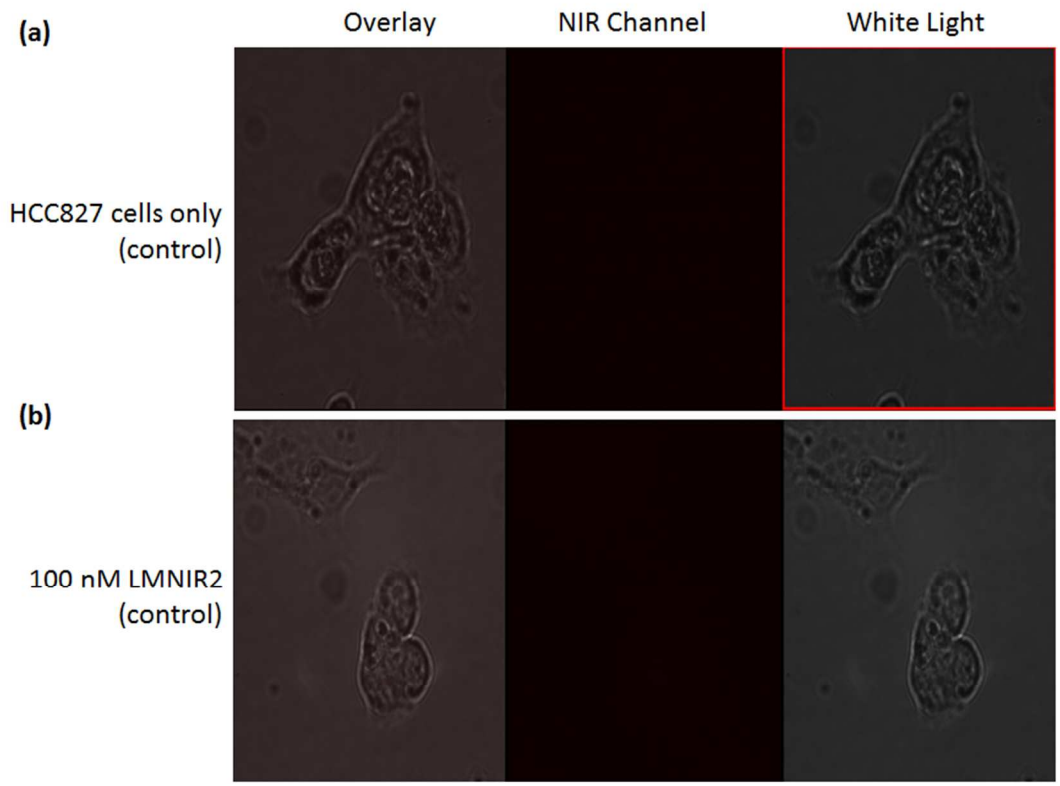

Figure S1. Fluorescence microscopy images of control experiments (a) untreated HCC827 cells only, and (b) HCC827 cells incubated with 100 nM LMNIR2 followed by the usual washing as performed in Fig.1.

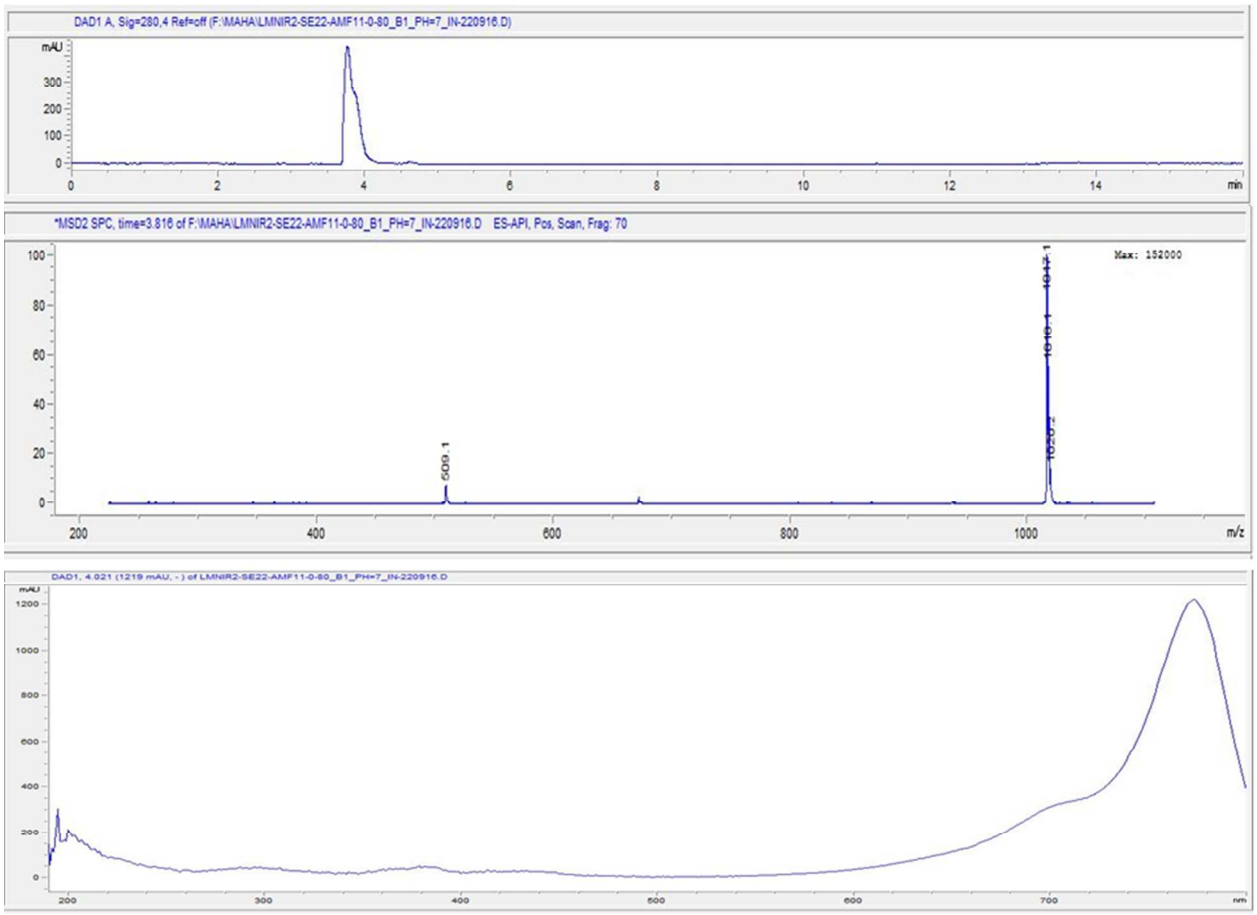

Figure S2. LC-MS and uv-vis characterization of LMNIR2.

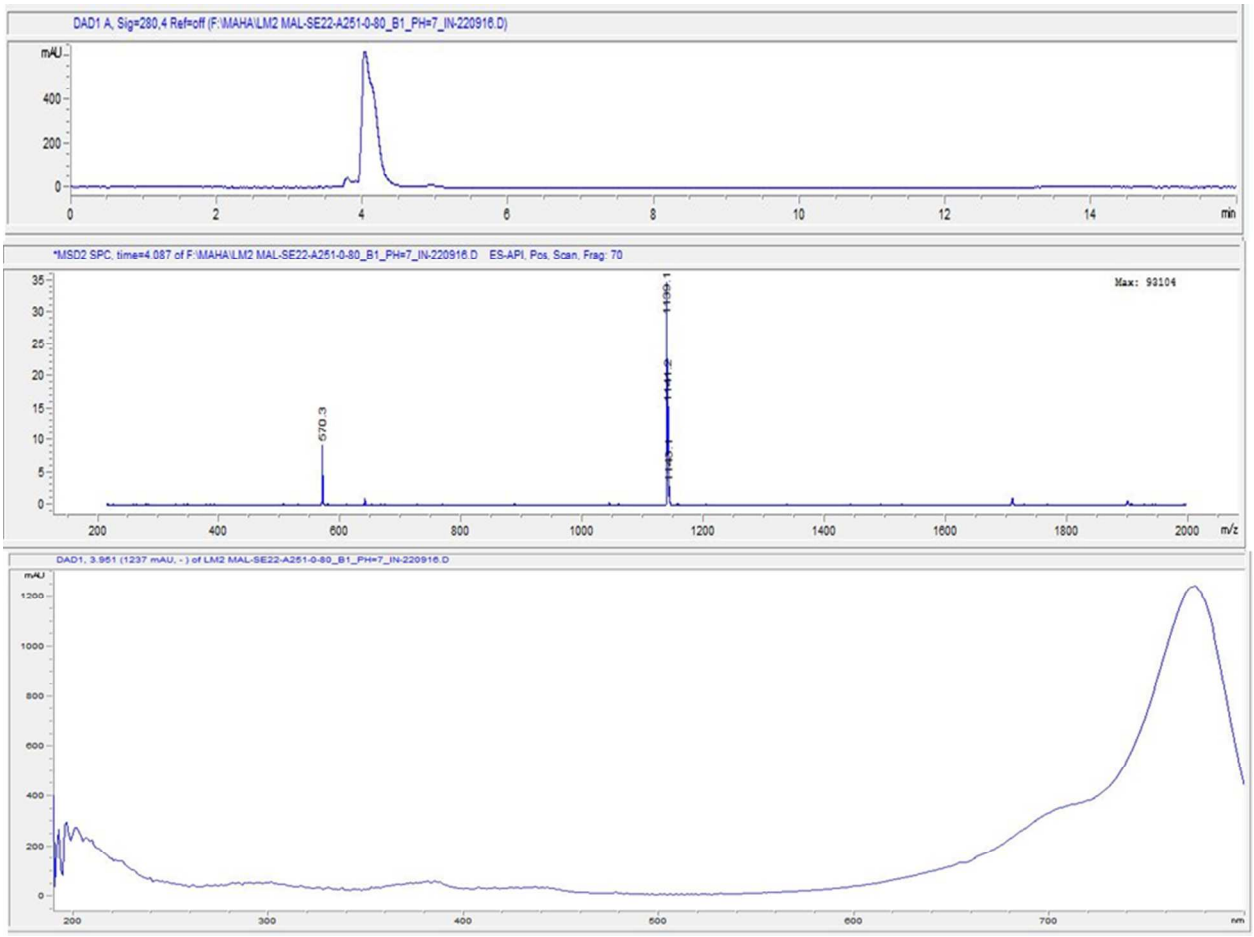

Figure S3. LC-MS and uv-vis characterization of LMNIR2-maleimide.

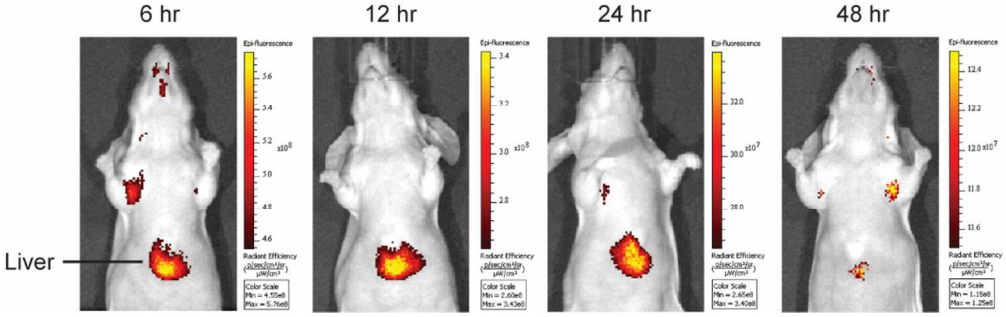

Figure S4. Analysis of liver clearance following tail vein injection of 10 nmol CNDC. Images were collected over a 48 h period with ventral exposure to facilitate liver imaging.

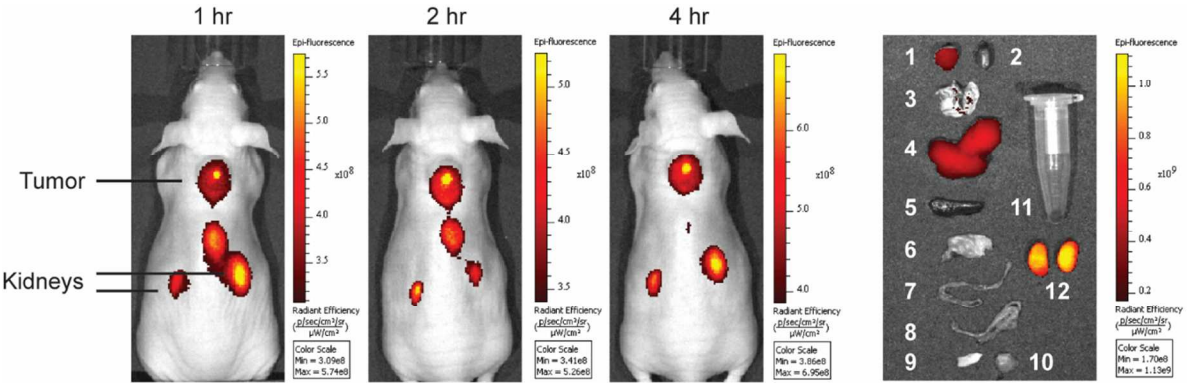

Figure S5. Representative images of HCC827 tumor bearing mice treated with 5 nmol CNDC. Mice were injected via tail vein with 5 nmol CNDC and fluorescence images were acquired over a 4 h period. Organs and tissues were dissected after whole animal imaging at 4 h and are labeled as follows: 1) tumor, 2) heart, 3) lungs, 4) liver, 5) spleen, 6) stomach, 7) small intestine, 8) large intestine, 9) skin, 10) muscle, 11) blood, 12) kidneys.

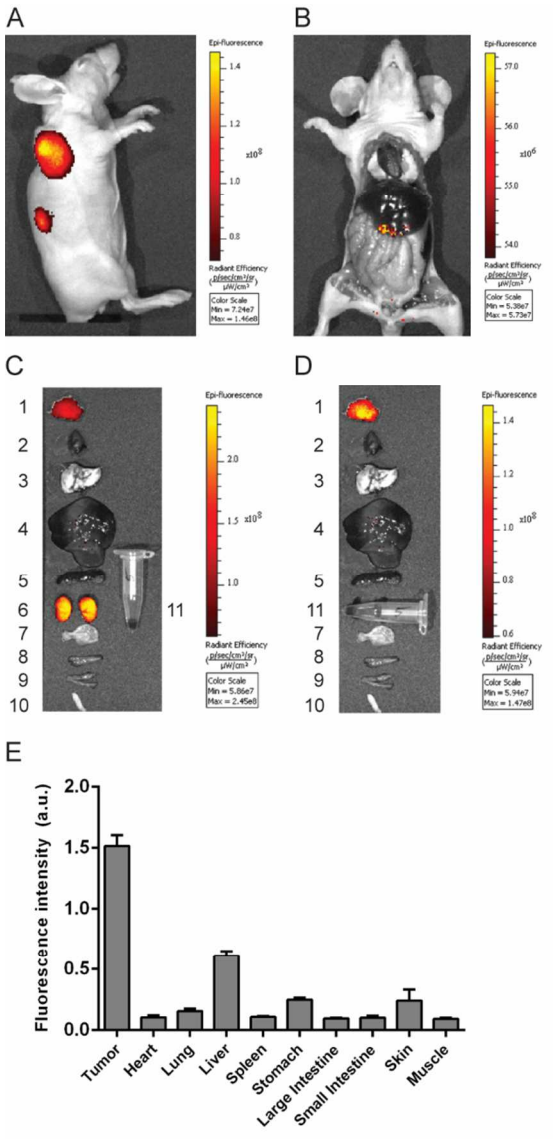

Figure S6. Imaging HCC827 tumor-bearing mice 24 h after a tail vein injection of 5 nmol of CNDC. Whole animal imaging to reveal **(A)** tumor and kidney uptake, and **(B)** liver uptake. Evaluation of internal CNDC accumulation in **(C)** all organs, **(D)** all organs excluding kidneys, and **(E)** quantification of the tissue fluorescence in **D** (data are mean ± SD of n=3.). Dissected organs/tissues are labeled as follows: 1) tumor, 2) heart, 3) lungs, 4) liver, 5) spleen, 6) kidneys, 7) stomach, 8) small intestines, 9) large intestines, 10) skin, 11) blood.

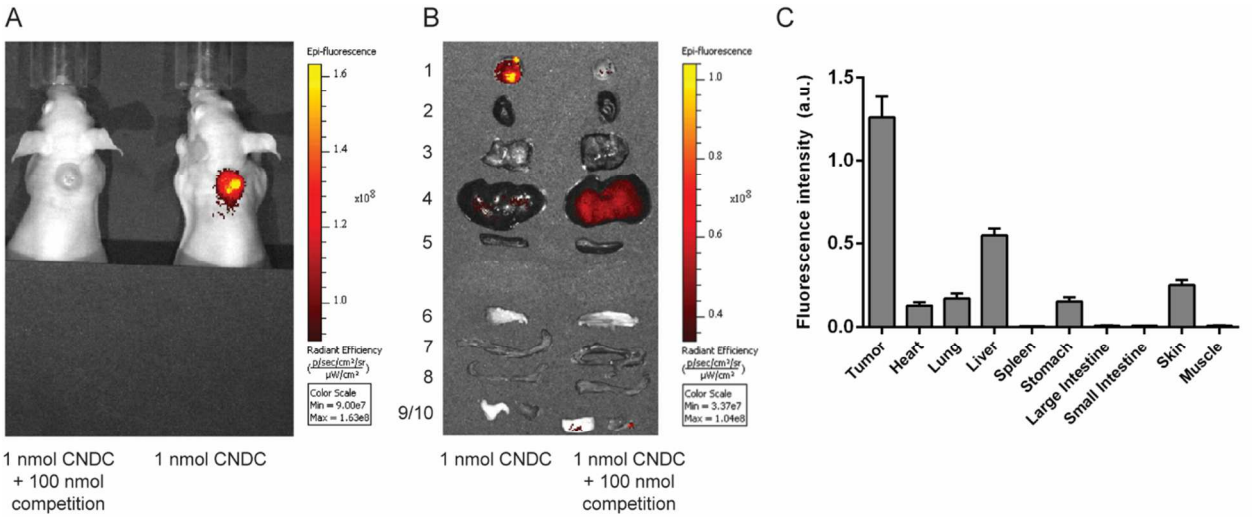

Figure S7. (A) Representative images of HCC827 tumor-bearing mice treated with 1 nmol CNDC with or without competition. Mice were injected via tail vein with 1 nmol CNDC in the presence or absence of a 100-fold excess of 83v2Cys to block all vacant receptor binding sites. Fluorescence images were acquired 4 h post-injection. **(B)** Organs and tissues (excluding kidneys) were dissected after whole animal imaging at 4 h and are labeled as follows: 1) tumor, 2) heart, 3) lungs, 4) liver, 5) spleen, 6) stomach, 7) small intestine, 8) large intestine, 9) skin, 10) muscle. **(C)** Quantification of mean fluorescence intensity ± SD for 3 mice.

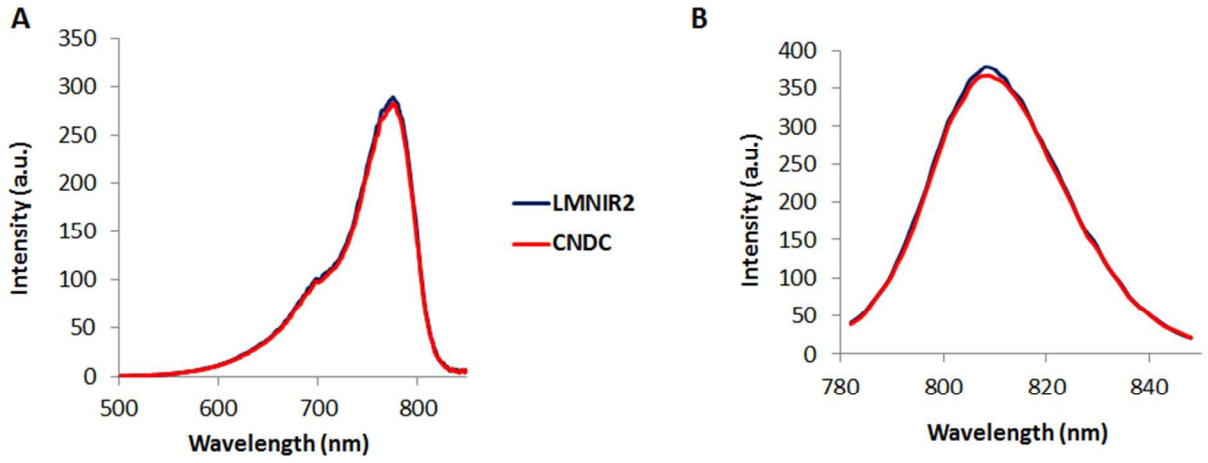

Figure S8. (A) Excitation (B) emission spectra of a 1µM solution of LMNIR2 (blue) and CNDC (red) in PBS.