

Supplementary Information

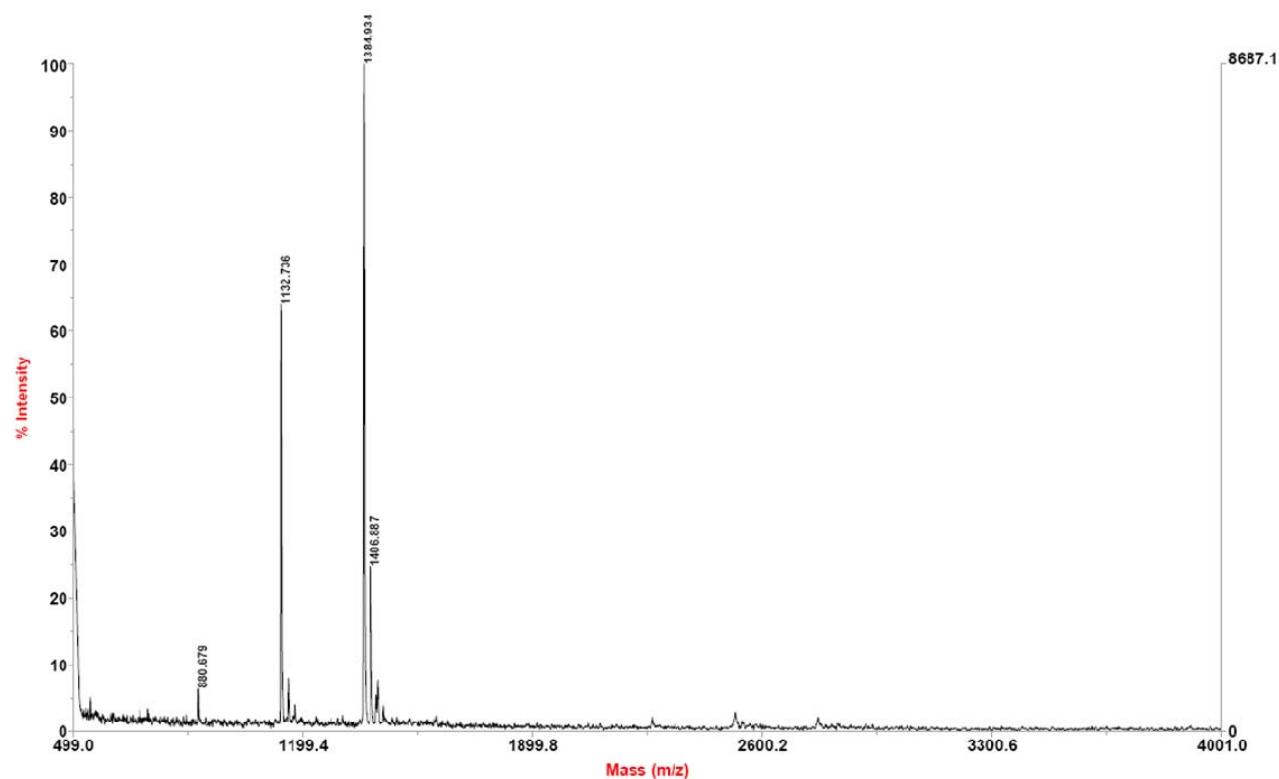
In vivo bioluminescence imaging of furin activity in breast cancer cells using luminogenic substrates

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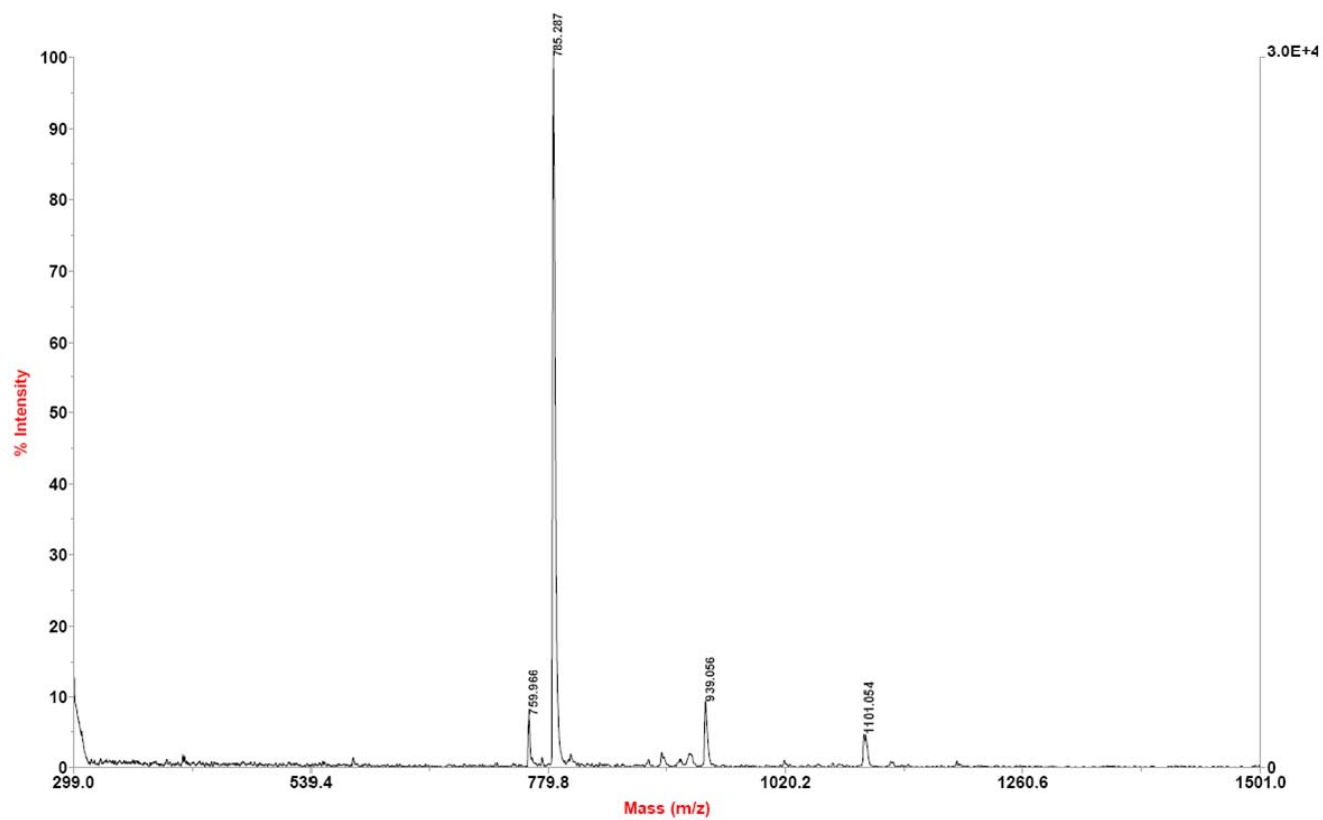
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- 1. Figures S1-S5. Mass spectra of peptide amino-luciferin conjugates.**
- 2. Figure S6. Imaging the furin inhibition in MDA-MB-468Fluc+ cells.**
- 3. Figure S7. Furin immunohistochemistry staining of tumor tissues.**

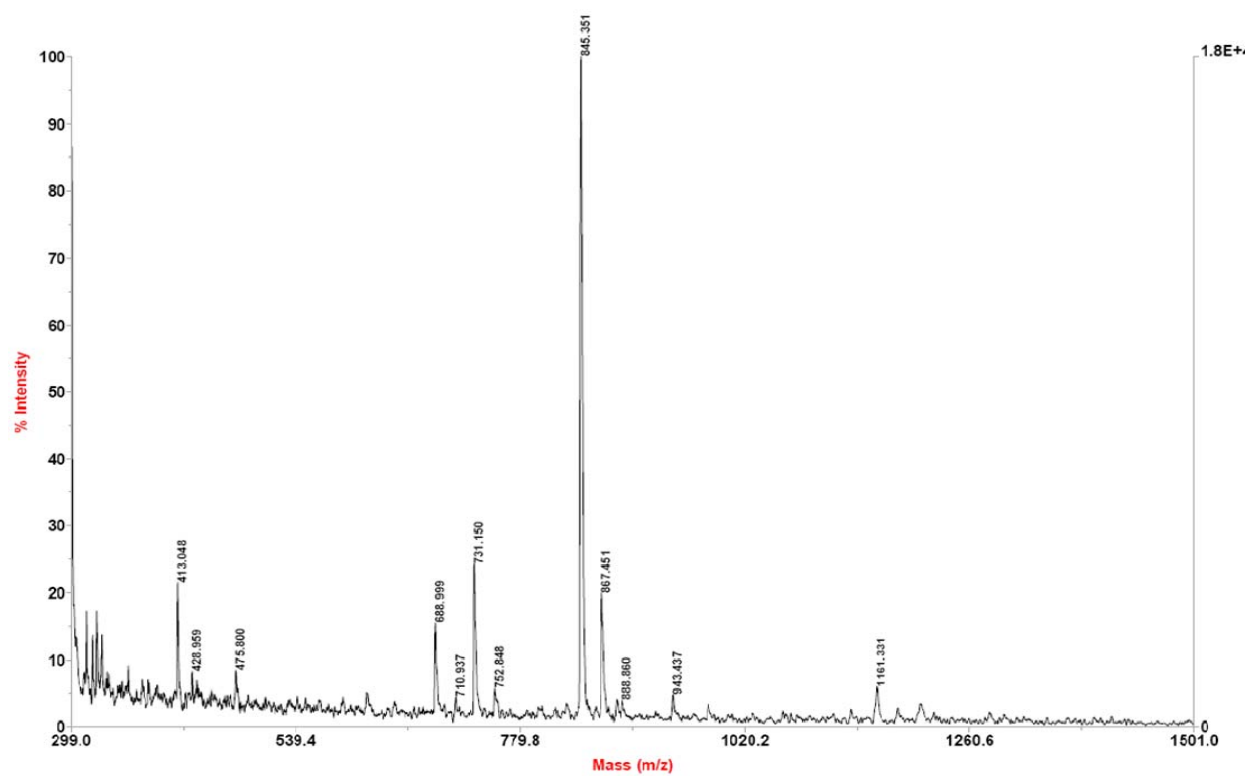
1. Supplementary Figures S1-S5. Mass spectra of peptide amino-luciferin conjugates.



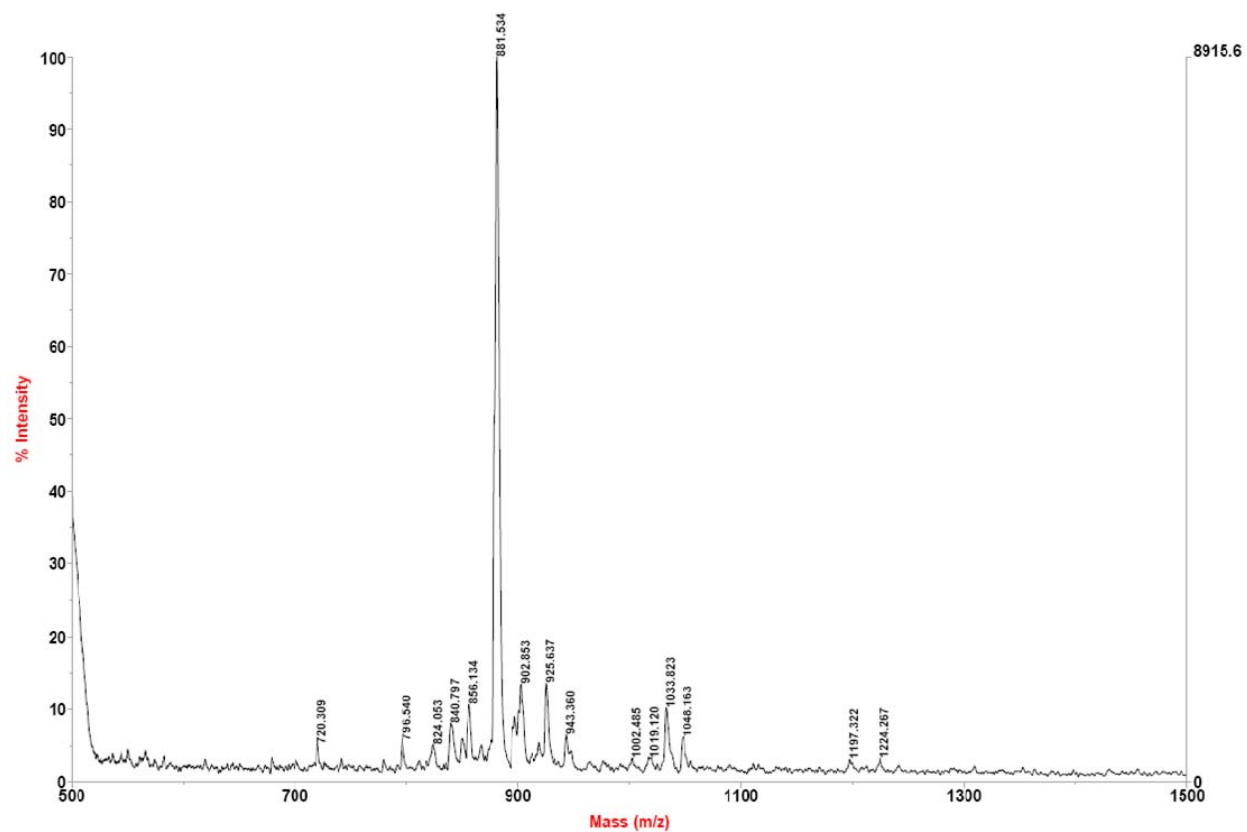
S1. MALDI-MS for Ac-R(Pbf)VR(Pbf)R(Pbf)-COOH. Calculated $[M+H]^+$: 1384.64 Observed $[M+H]^+$: 1384.93 and $[M-Pbf]^+$: 1132.73.



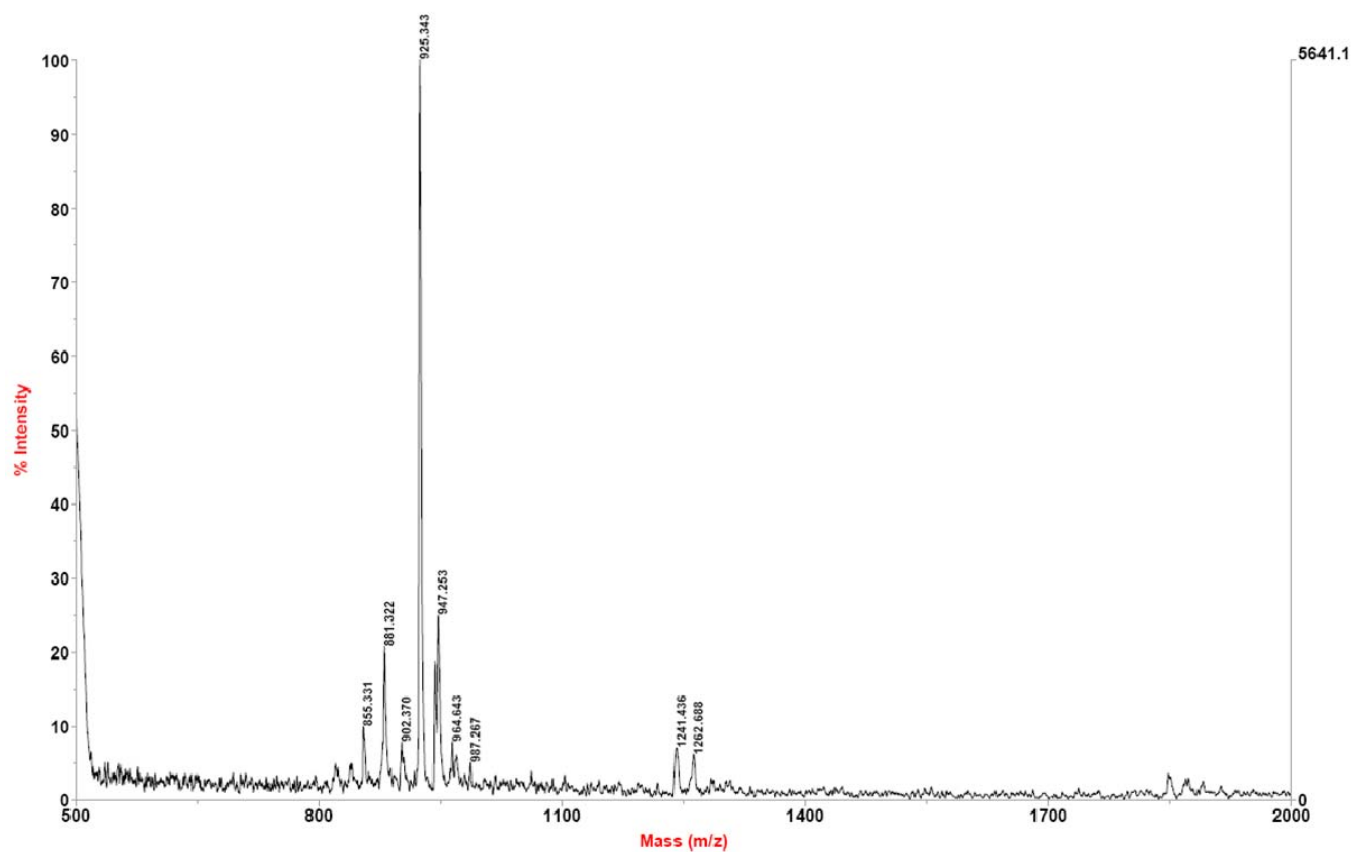
S2. MALDI-MS for Ac-RVRR-CABT. Calculated $[M+H]^+$: 785.4 Observed $[M+H]^+$: 785.3.



S3. MALDI-MS for Ac-RVRR-AmLuc. Calculated $[M-CO_2]^+$: 845.41 Observed $[M-CO_2]^+$: 845.35.



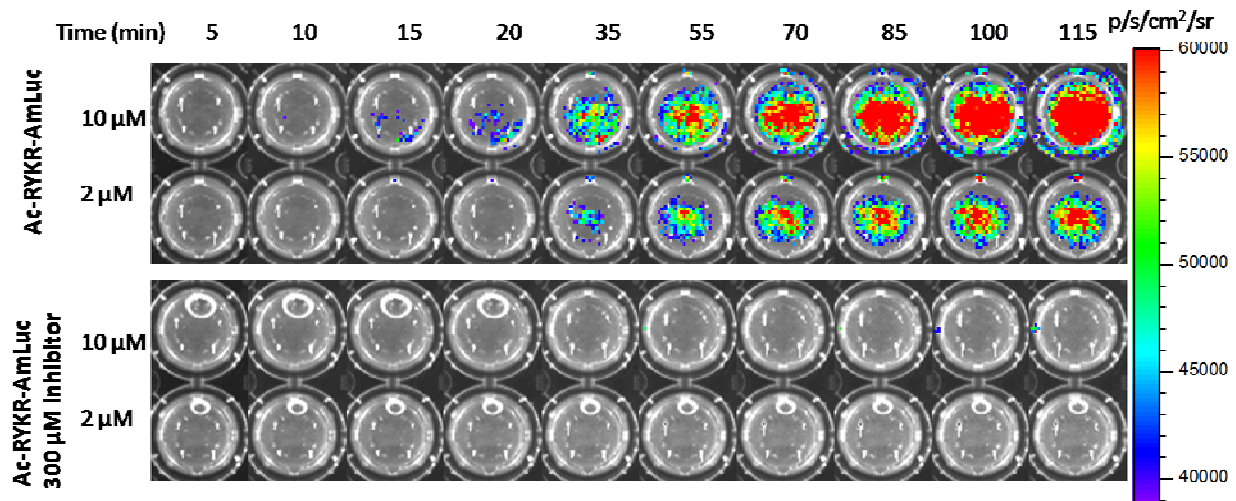
S4. MALDI-MS for Ac-RYKR-AmLuc. Calculated $[M-CO_2]^+$: 881.39 Observed $[M-CO_2]^+$: 881.53.



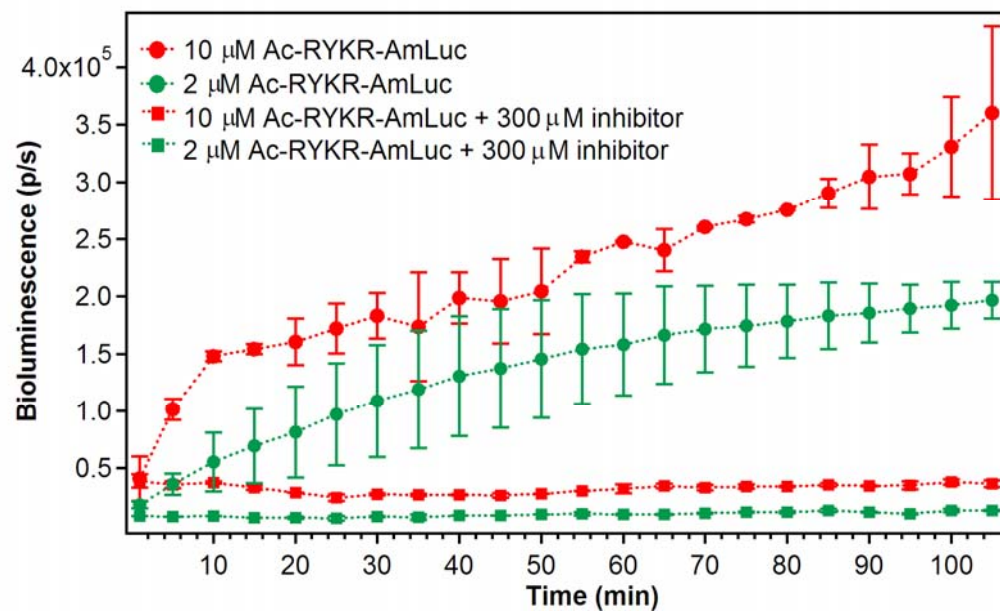
S5. MALDI-MS for Ac-RRKY-AmLuc. Calculated $[M+H]^+$: 925.38 Observed $[M+H]^+$: 925.34.

2. Figure S6. Imaging the furin inhibition in MDA-MB-468Fluc+ cells. *A.* Bioluminescence imaging of cells incubated with 2 and 10 μM of Ac-RYKR-AmLuc in the absence and in the presence of 300 μM furin inhibitor. *B.* Quantification of the bioluminescence signal; ROIs were drawn over individual wells and the total flux in photon/s was plotted vs. time.

A.



B.



3. Figure S7. Furin immunohistochemistry staining of tumor tissues with anti-furin rabbit polyclonal antibody followed by anti-rabbit polyclonal goat IgG antibody conjugated with rhodamine (red). The nucleus was stained with DAPI (blue). Size bar represents 20 μm .

