

Supporting Information

# Novel leucine zipper motif-based hybrid peptide delivers a functional peptide cargo inside cells

Y. Hakata,<sup>\*a</sup> S. Tsuchiya,<sup>b</sup> H. Michiue,<sup>c</sup> T. Ohtsuki,<sup>d</sup> H. Matsui,<sup>c</sup> M. Miyazawa<sup>a</sup> and M. Kitamatsu<sup>\*b</sup>

<sup>a</sup> Department of Immunology, Faculty of Medicine, Kinki University, 377-2 Ohno-Higashi, Sayama, Osaka 589-8511, Japan. \*E-mail: hakata@med.kindai.ac.jp; Tel: +81-72-366-0221.

<sup>b</sup> Department of Applied Chemistry, Faculty of Science and Engineering Kinki University, 3-4-1 Kowakae, Higashi-Osaka, Osaka 577-8502, Japan. \*E-mail: kitamatu@apch.kindai.ac.jp; Tel: +81-6-6721-2332.

<sup>c</sup> Department of Physiology, Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama University, 2-5-1 Shikata-cho, kita-ku, Okayama 700-8558, Japan

<sup>d</sup> Department of Biotechnology, Graduate School of Natural Science and Technology, Okayama University, 3-1-1 Tsushimanaka, kita-ku, Okayama 700-8530, Japan

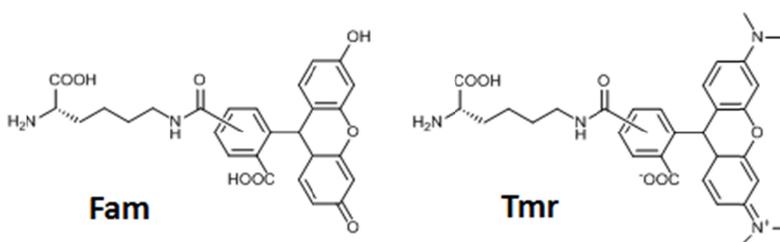


Fig. S1 Chemical structures of Fam and Tmr.

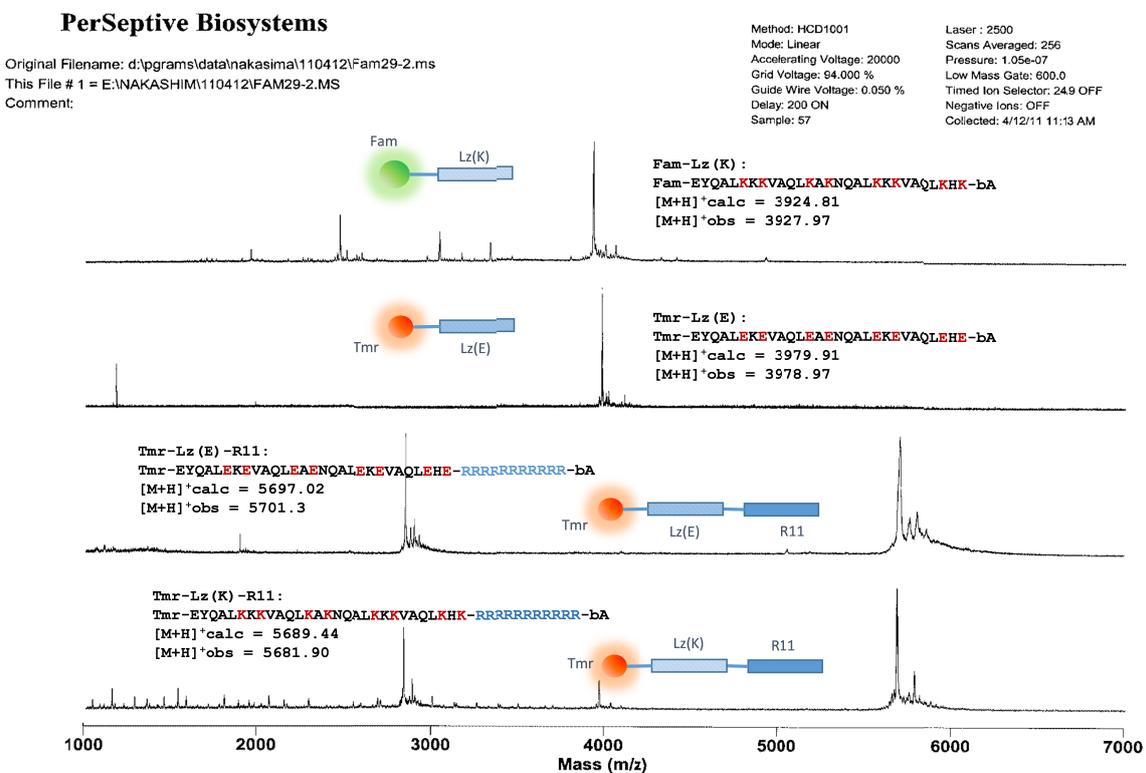


Fig. S2 MALDI-ToF Mass spectra of Fam-Lz(K) and, Tmr-Lz(E), Tmr-Lz(E)-R11, Tmr-Lz(K)-R11.

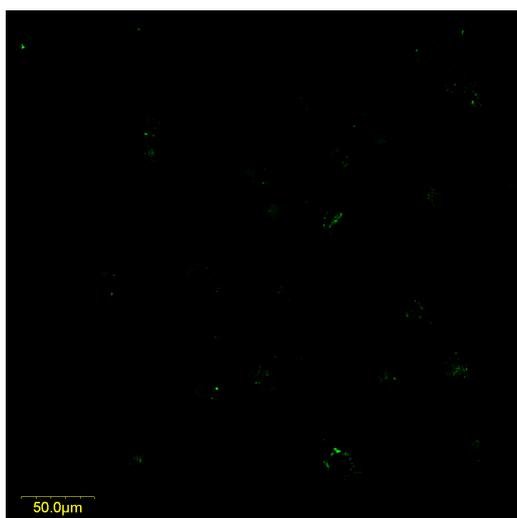


Fig. S3 Confocal microscopy image of U-251 MG cells treated with Fam-Lz(K). The cells were treated with 10  $\mu$ M for 4 h at 37°C.

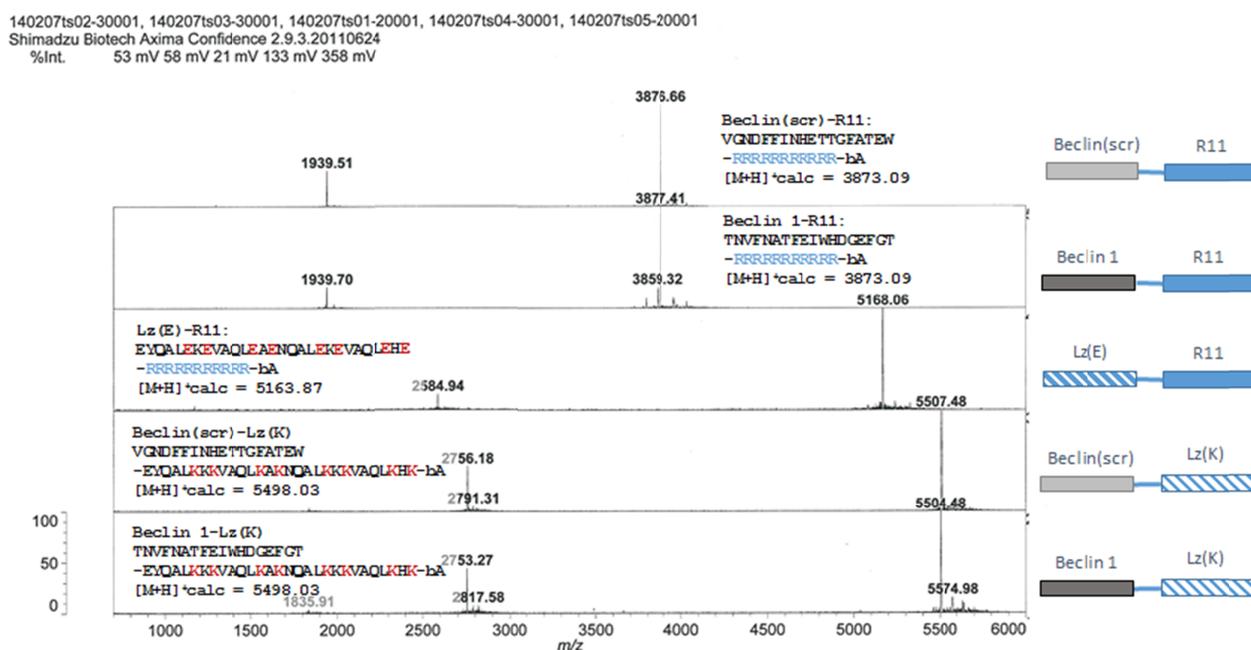


Fig. S4 MALDI-ToF Mass spectra of Beclin 1-Lz(K) and Beclin(scr)-Lz(K), Lz(E)-R11, Beclin 1-R11, Beclin(scr)-R11.