

## Supporting information of

### IQF characterization of a cathepsin B-responsive nanoprobe for report of differentiation of HL60 cells into macrophages

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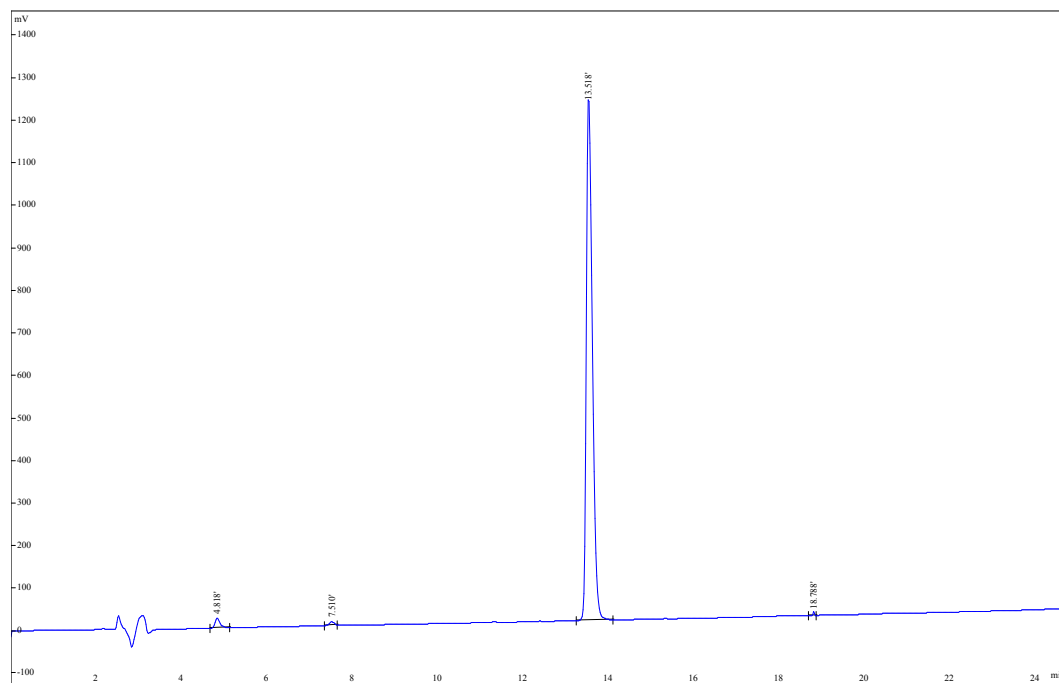


Fig. S1 HPLC spectrum of Abz-FRFK-Dnp

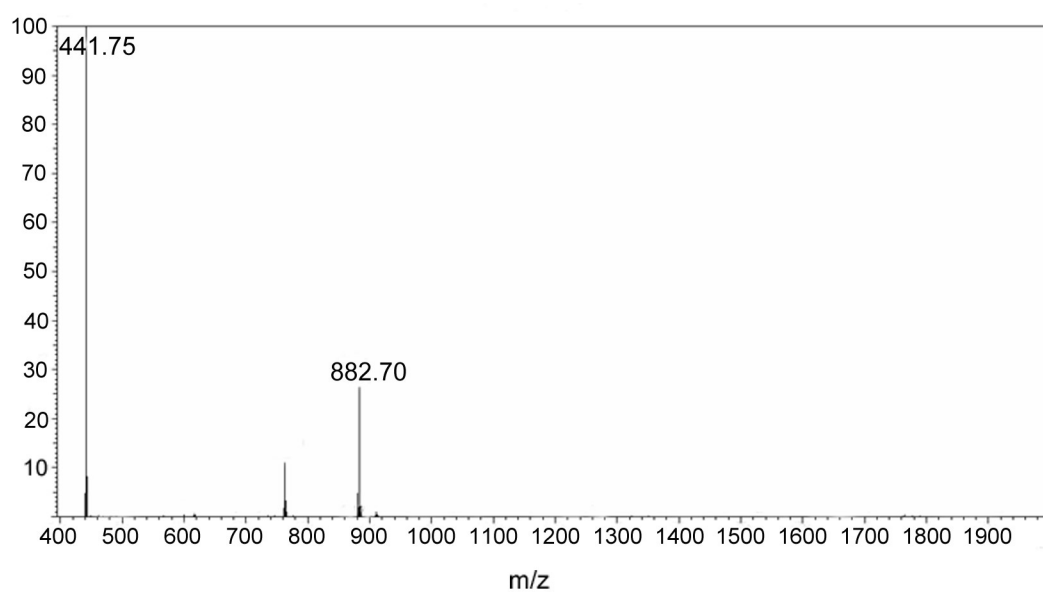


Fig. S2 ESI-MS spectrum of Abz-FRFK-Dnp

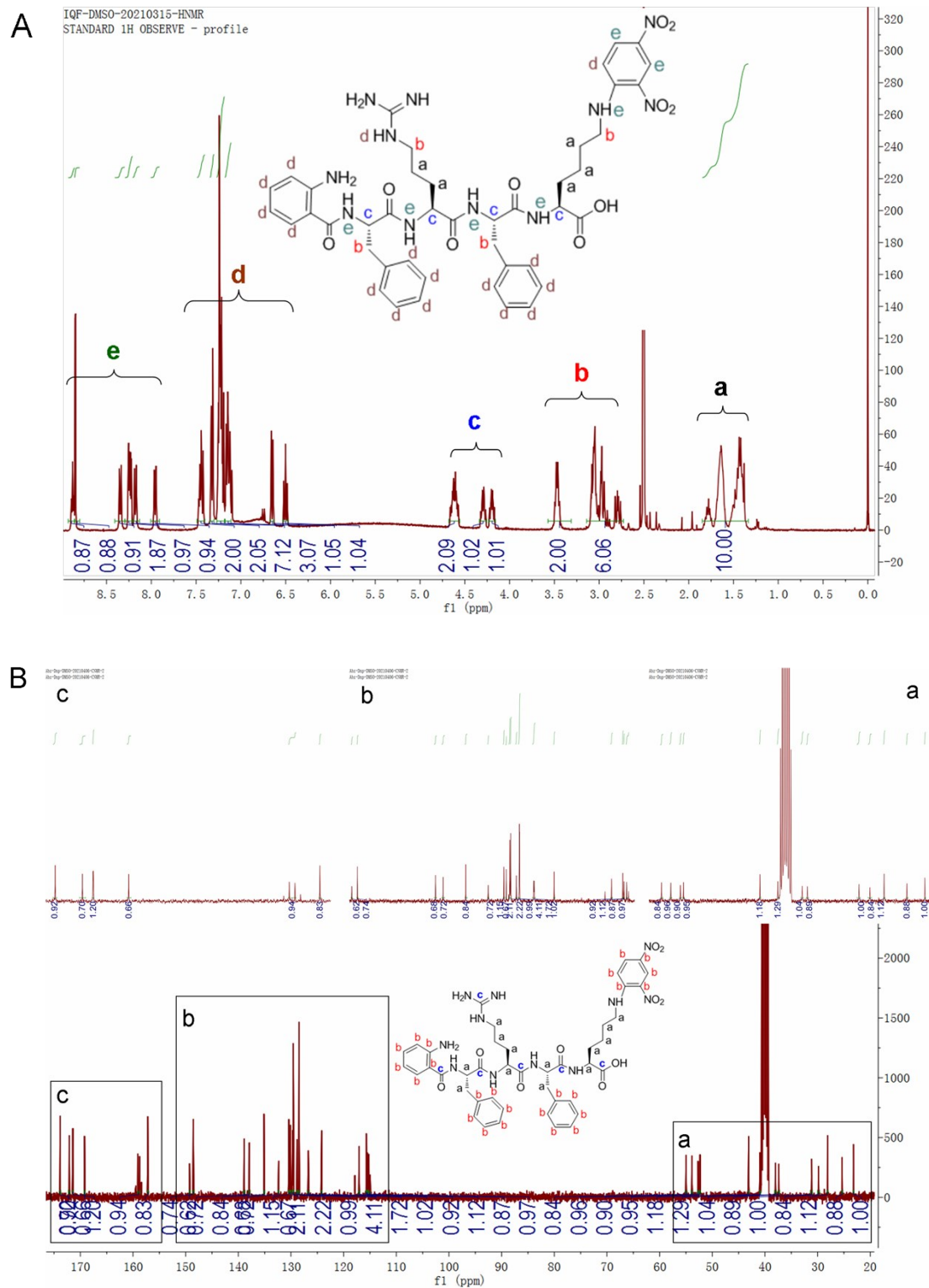


Fig. S3  $^1\text{H}$  (A) and  $^{13}\text{C}$  (B) NMR spectra of Abz-FRfK-Dnp

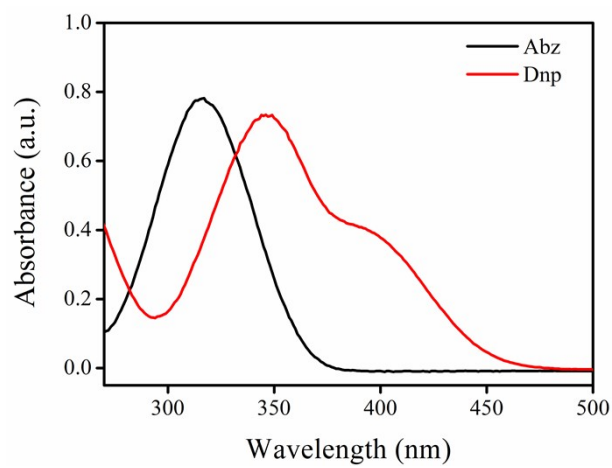


Fig. S4 UV spectra of Abz and Dnp.

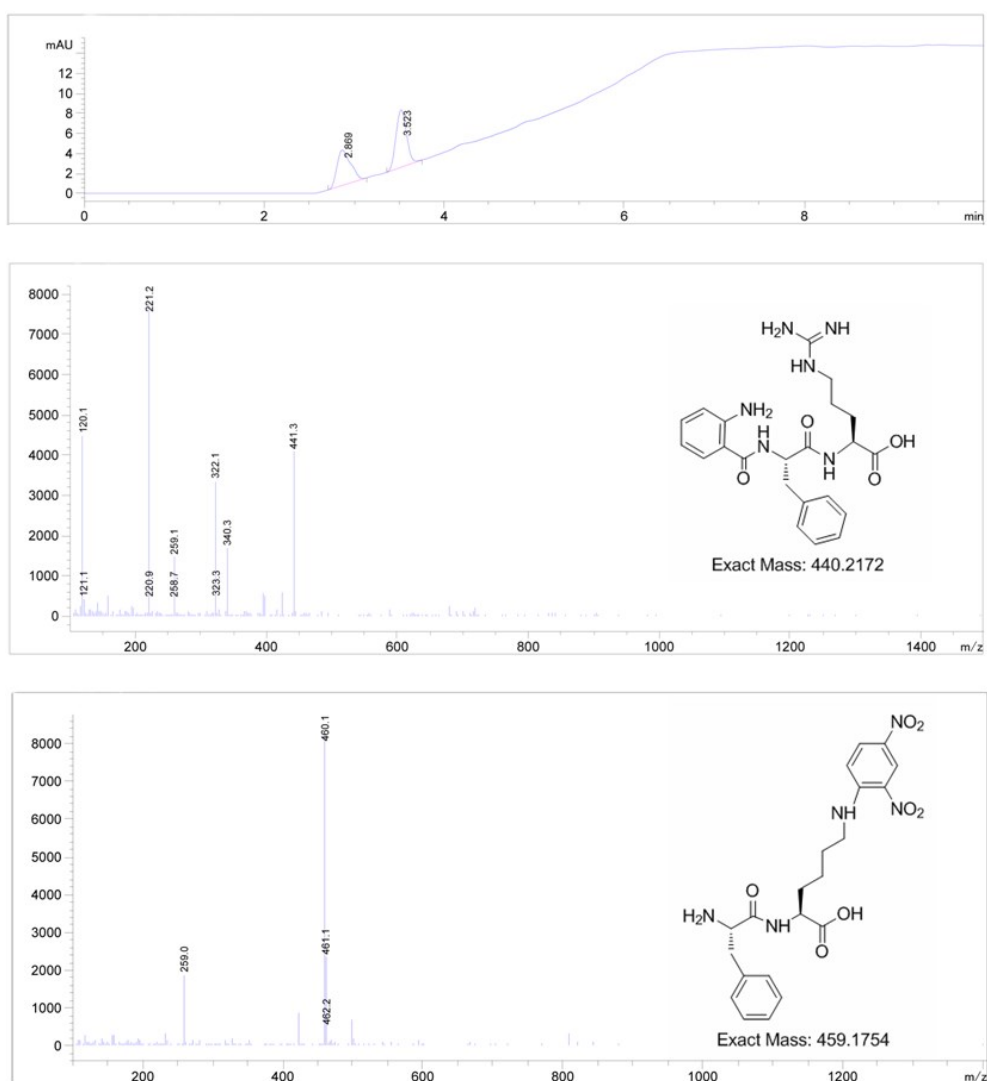


Fig. S5 LC-MS spectra of Abz-FRFRK-Dnp after Cat B proteolysis

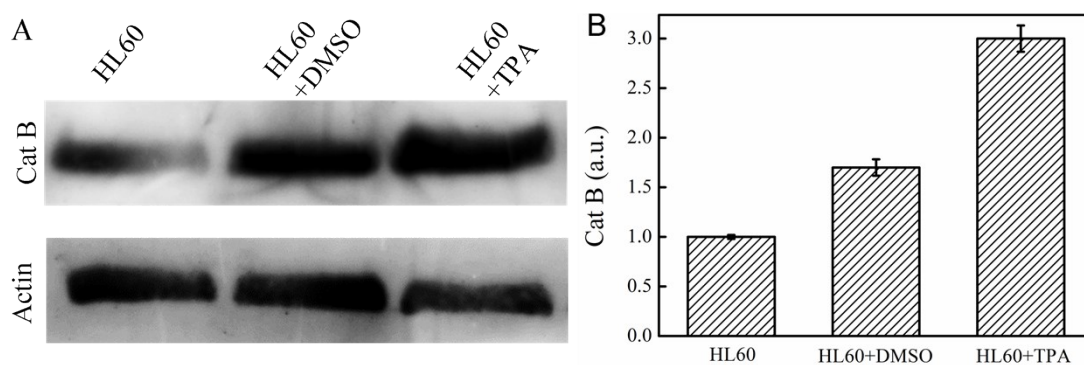


Fig. S6 (A) Western blot assay of Cat B with HL60, granulocyte (HL60+DMSO) and macrophage (HL60+TPA) lysates, (B) Quantification of data from A. Whole cell (HL60 cell and its differentiated daughter cell) protein was prepared with radioimmuno-precipitation(RIPA) assay buffer and phosphatase inhibitors. The protein extracts were quantitated by BCA assay, resolved by SDS-PAGE on 4-12% Bis-Tris gels, and transferred to PVDF membranes. Membranes were blotted with Cat B antibodies, luminescent detected by Luminescent Imaging Analyzer (ImageQuant LAS 4000mini, GE, USA) and quantitative by image J software.

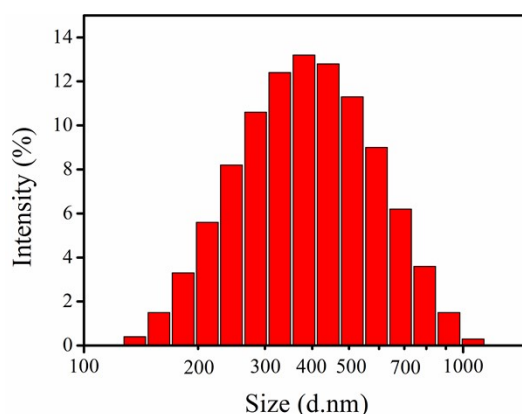


Fig. S7 DLS of Abz-FRFRK-Dnp@PLGA.