

Supporting Information

A pH-Sensitive Glutathione Responsive Small-Molecule Probe TZ2 Sensitizes Lung Cancer Cells to Chemotherapy by Targeting Tumor Microenvironment

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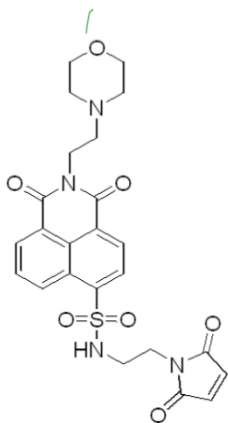
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Key Words: tumor microenvironment; GSH depletion; pH response; drug resistance

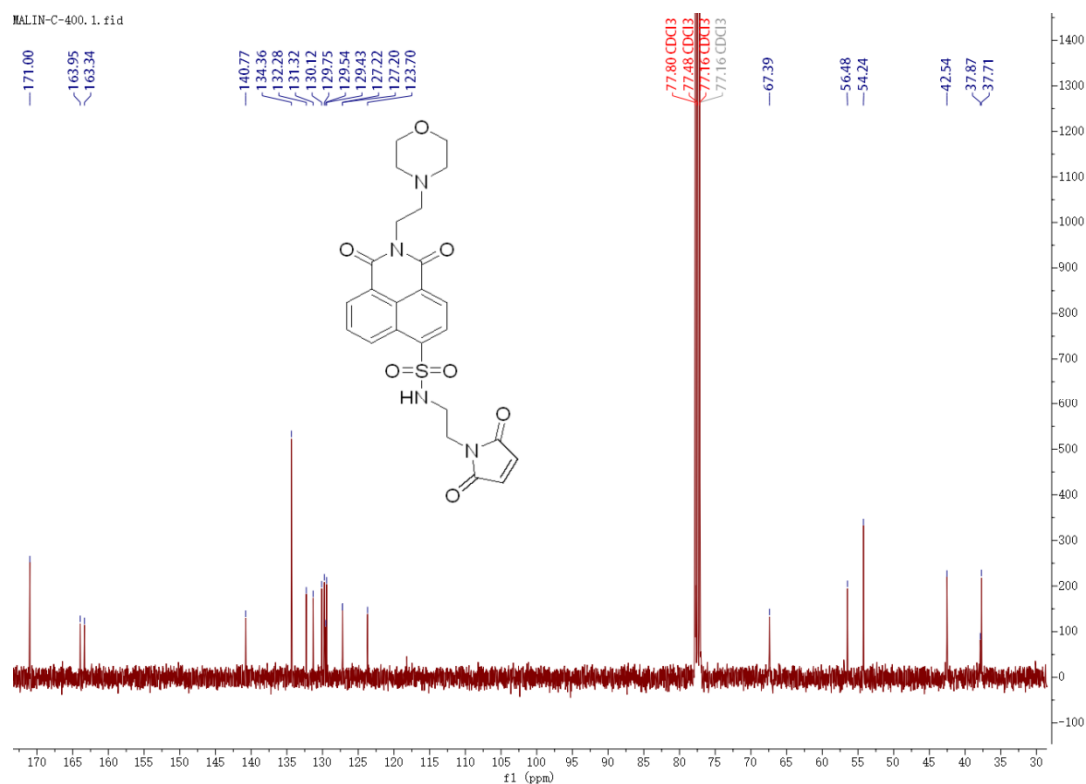
This PDF file includes:

1. Chemical characterization of TZ2, Fig. S1 to S4
2. HRMS (ESI) spectrum of TZ2-1 and TZ2-2, Fig. S5 to S6
3. HRMS (ESI) spectrum of TZ2 and GSH at different pH conditions, Fig. S7 to S17
4. Full unprocessed fluorescence imaging
5. Full and uncropped western blots

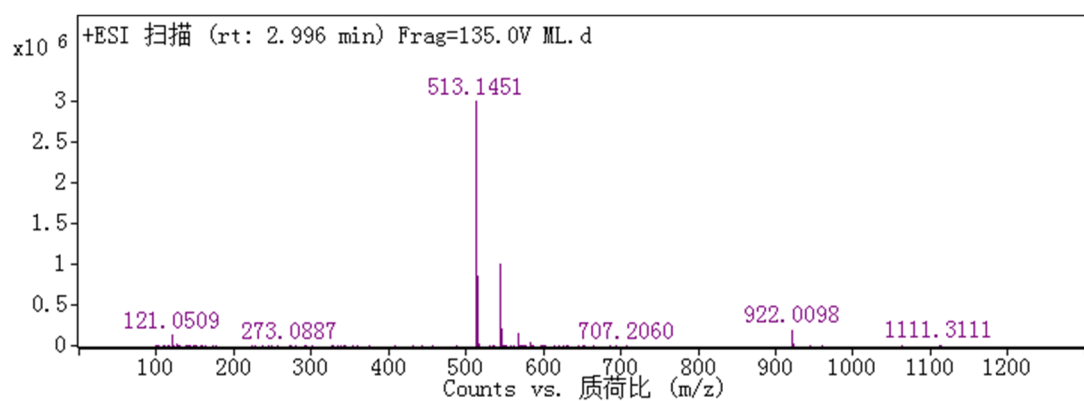
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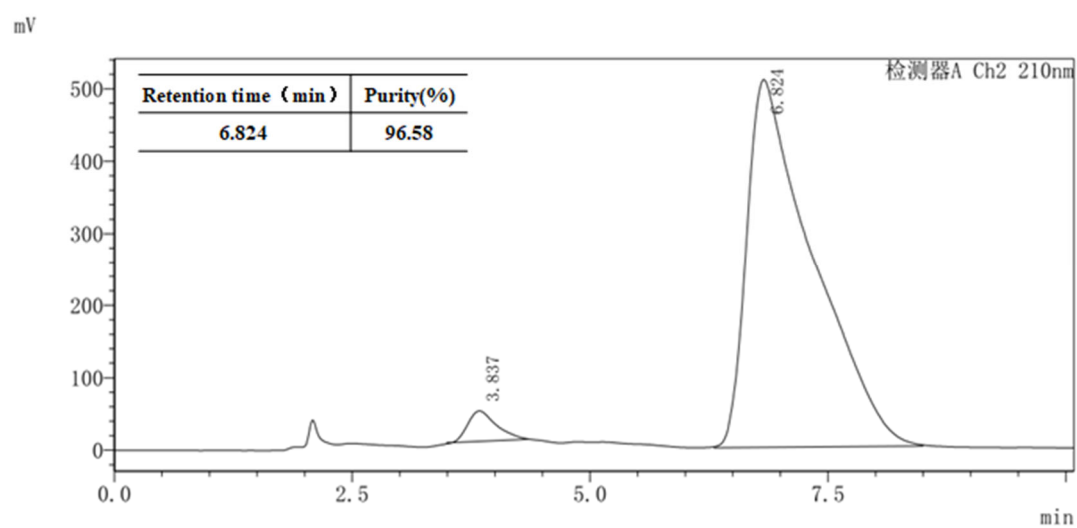
Supplementary Figure S1. ¹H NMR spectrum of **TZ2** in Chloroform-d



Supplementary Figure S2. ^{13}C NMR spectrum of **TZ2** in Chloroform-d

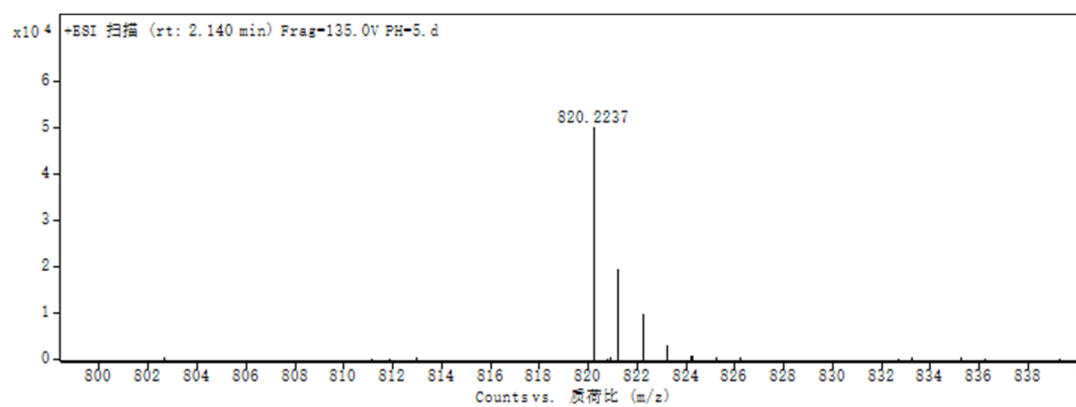


Supplementary Figure S3. HRMS (ESI) spectrum of **TZ2**

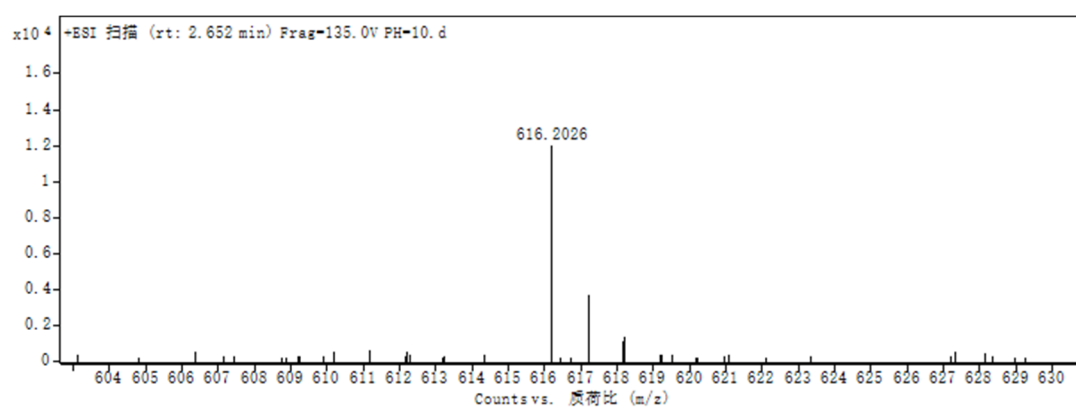


Supplementary Figure S4. HPLC of **TZ2** (mobile phase: 35% methyl alcohol-water)

HRMS (ESI) spectrum of TZ2-1 and TZ2-2

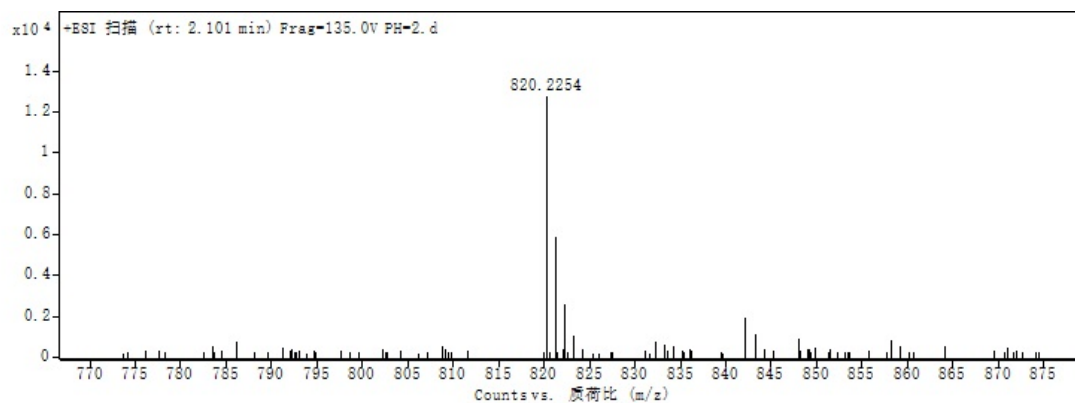


Supplementary Figure S5. HRMS (ESI) spectrum of TZ2-1

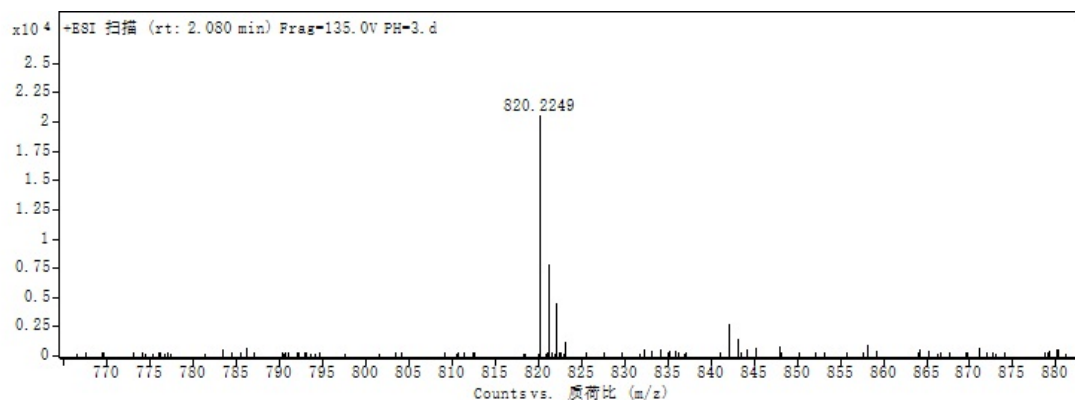


Supplementary Figure S6. HRMS (ESI) spectrum of TZ2-2

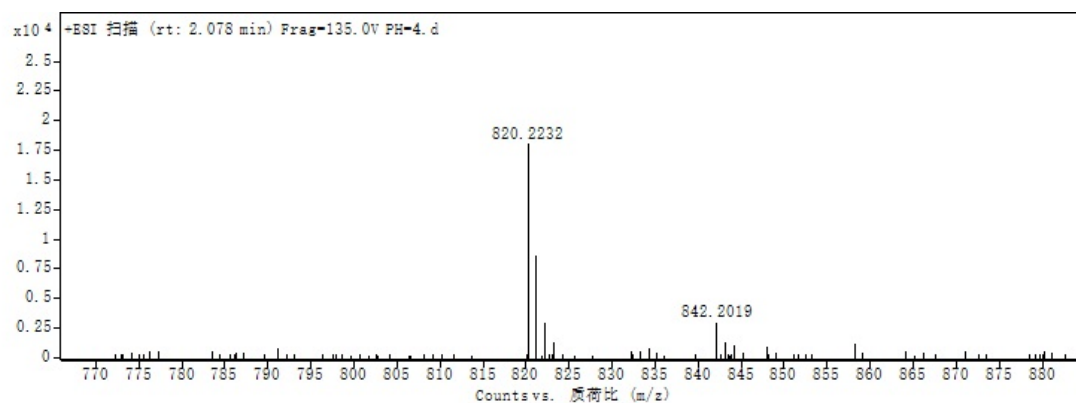
HRMS (ESI) spectrum of TZ2 and GSH at different pH conditions



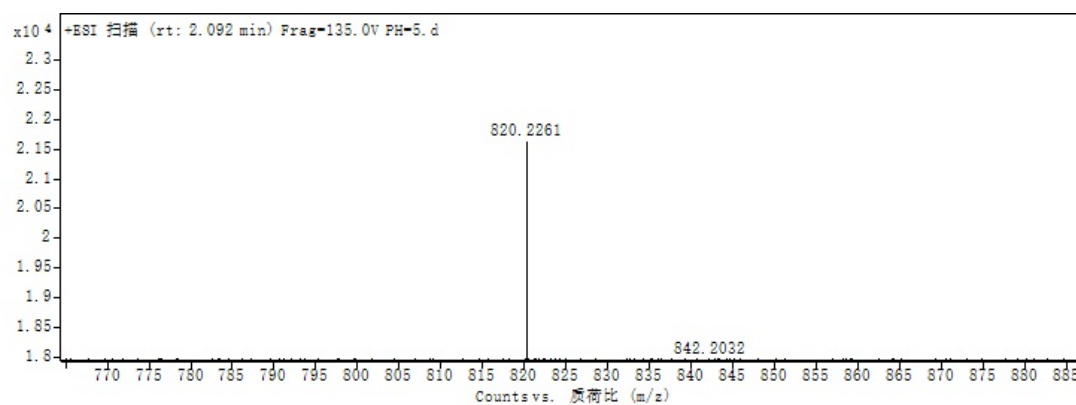
Supplementary Figure S7. HRMS (ESI) spectrum of **TZ2-1** formed by the reaction of **TZ2** with GSH at pH 2.



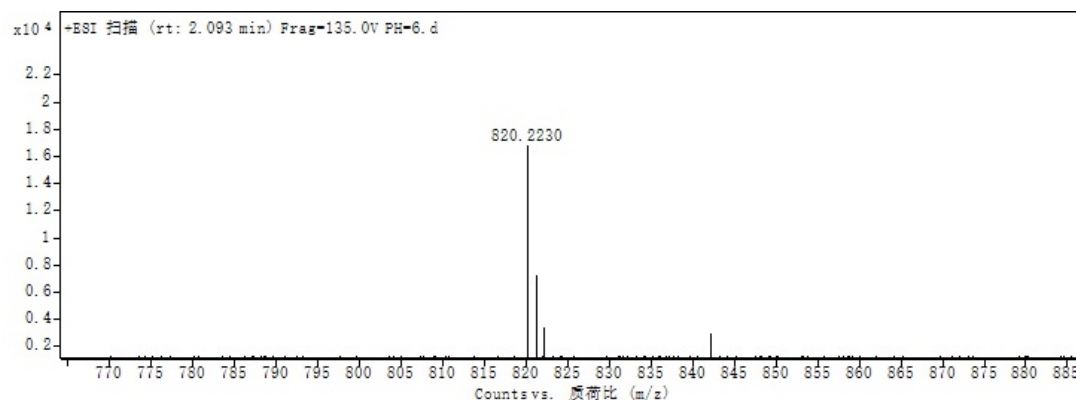
Supplementary Figure S8. HRMS (ESI) spectrum of **TZ2-1** formed by the reaction of **TZ2** with GSH at pH 3.



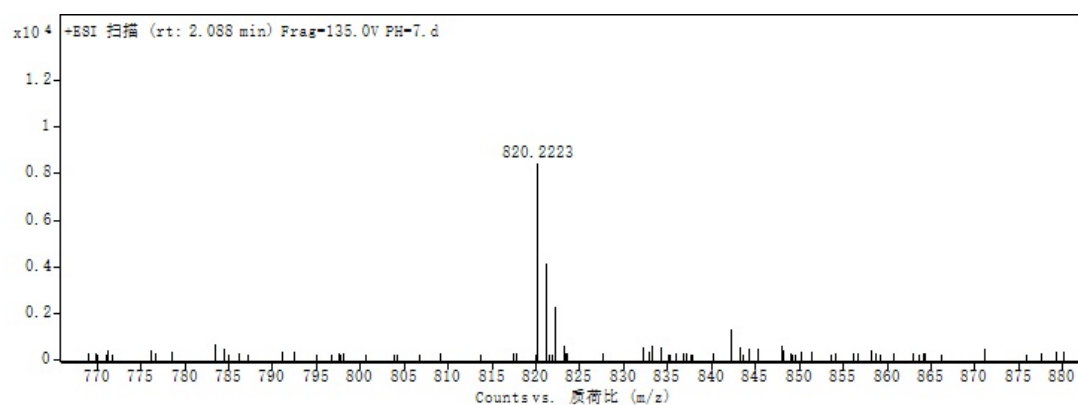
Supplementary Figure S9. HRMS (ESI) spectrum of **TZ2-1** formed by the reaction of **TZ2** with GSH at pH 4.



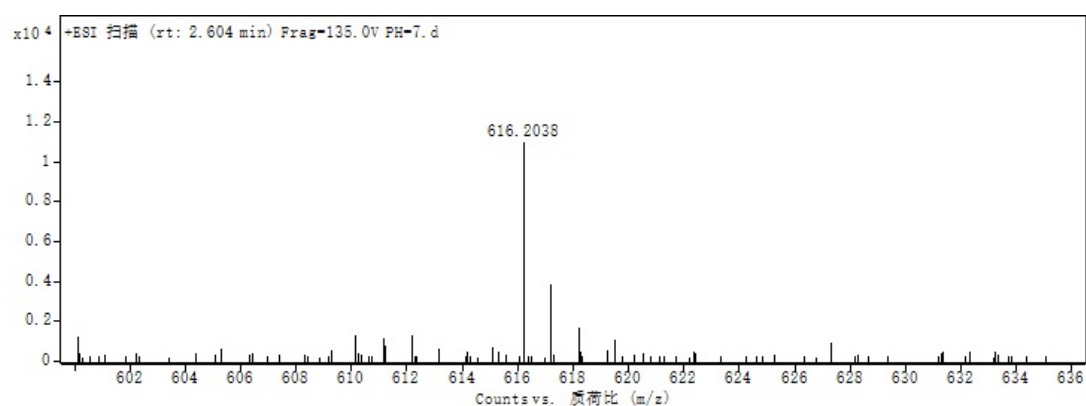
Supplementary Figure S10. HRMS (ESI) spectrum of **TZ2-1** formed by the reaction of **TZ2** with GSH at pH 5.



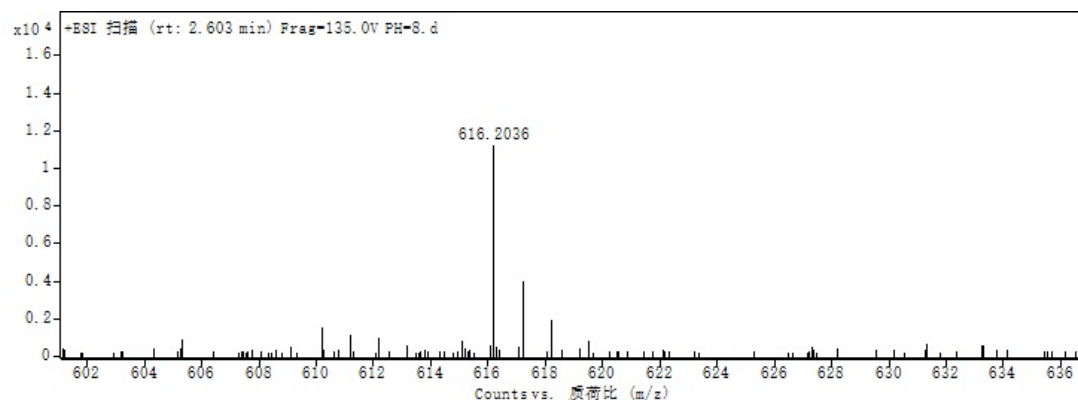
Supplementary Figure S11. HRMS (ESI) spectrum of **TZ2-1** formed by the reaction of **TZ2** with GSH at pH 6.



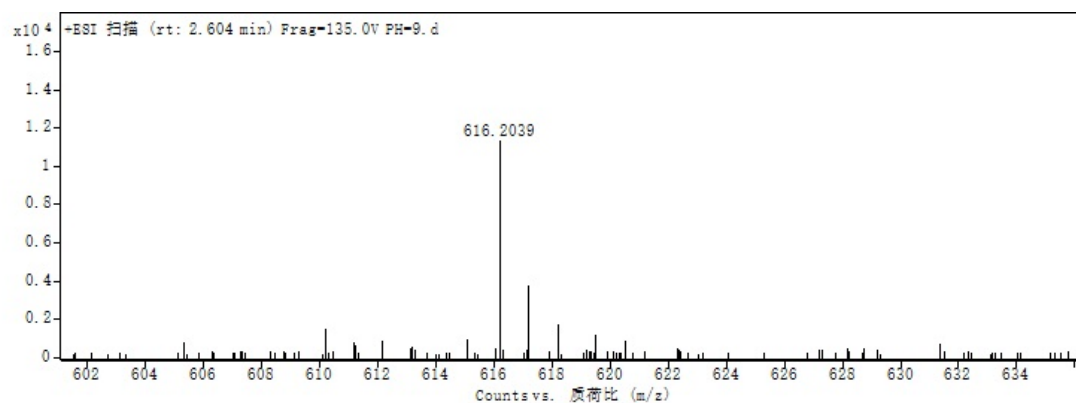
Supplementary Figure S12. HRMS (ESI) spectrum of **TZ2-1** formed by the reaction of **TZ2** with GSH at pH 7.



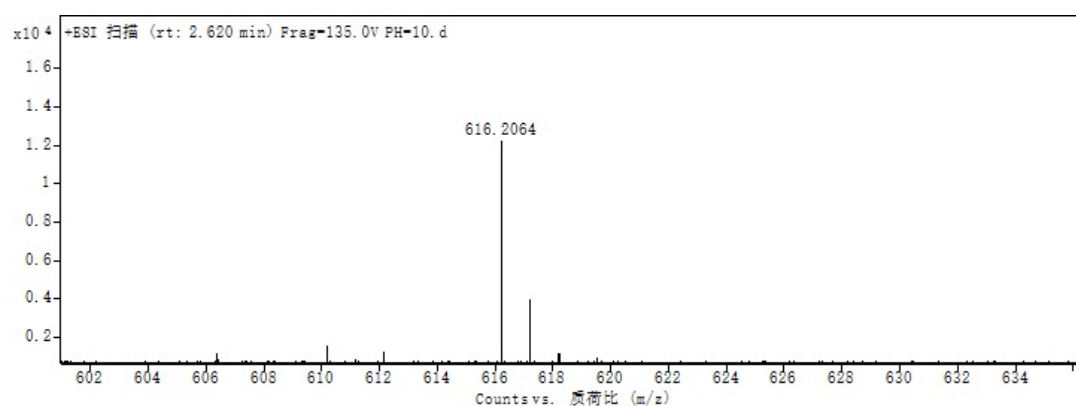
Supplementary Figure S13. HRMS (ESI) spectrum of **TZ2-2** formed by the reaction of **TZ2** with GSH at pH 7



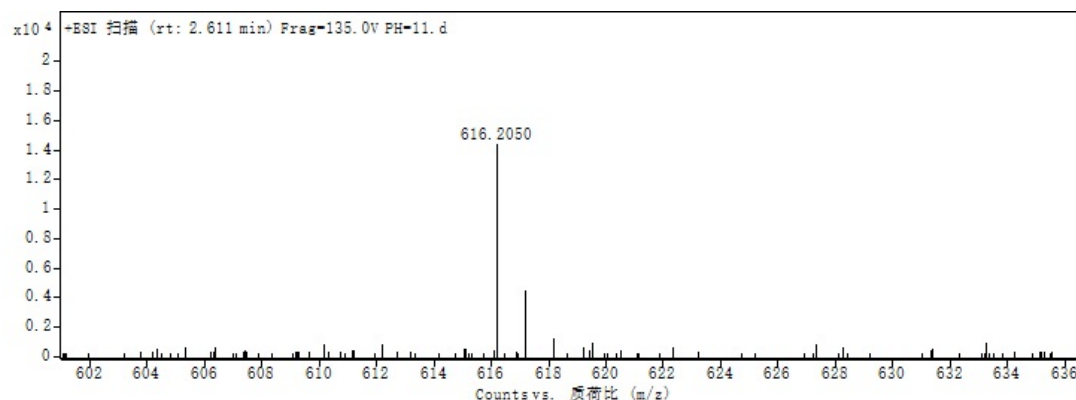
Supplementary Figure S14. HRMS (ESI) spectrum of **TZ2-2** formed by the reaction of **TZ2** with GSH at pH 8



Supplementary Figure S15. HRMS (ESI) spectrum of **TZ2-2** formed by the reaction of **TZ2** with GSH at pH 9

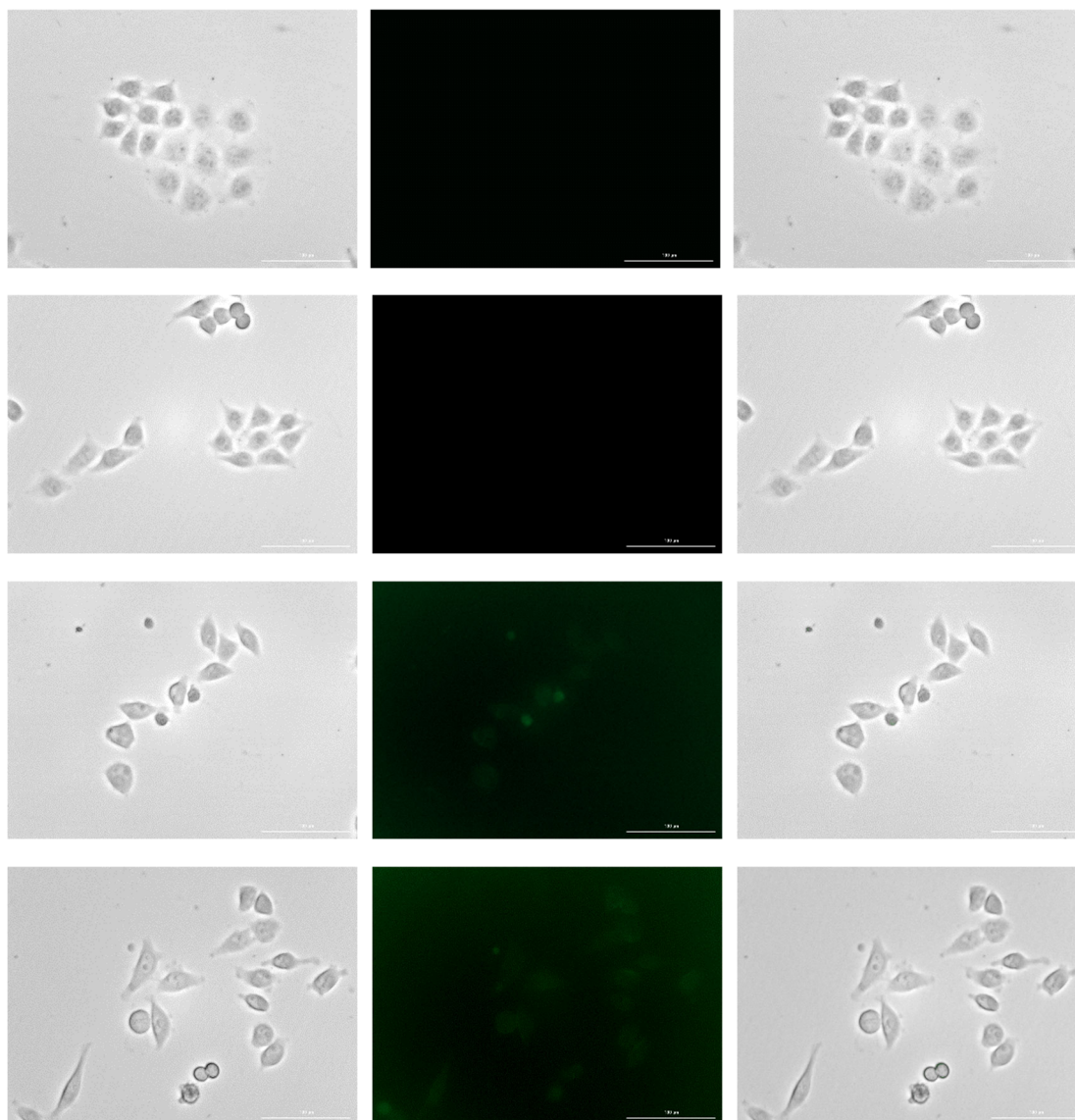


Supplementary Figure S16. HRMS (ESI) spectrum of **TZ2-2** formed by the reaction of **TZ2** with GSH at pH 10

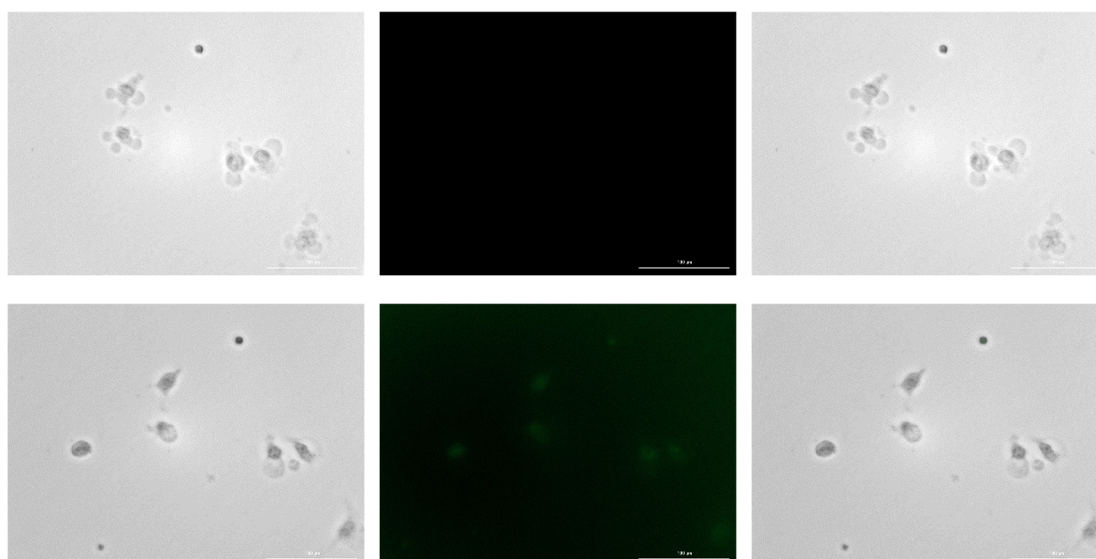


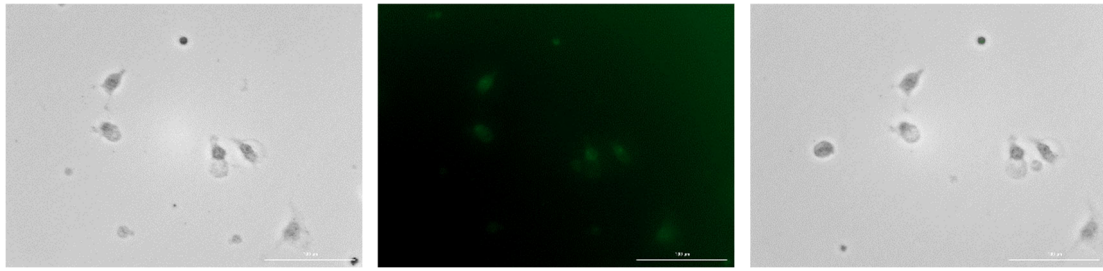
Supplementary Figure S17. HRMS (ESI) spectrum of **TZ2-2** formed by the reaction of **TZ2** with GSH at pH 11

Full unprocessed fluorescence imaging

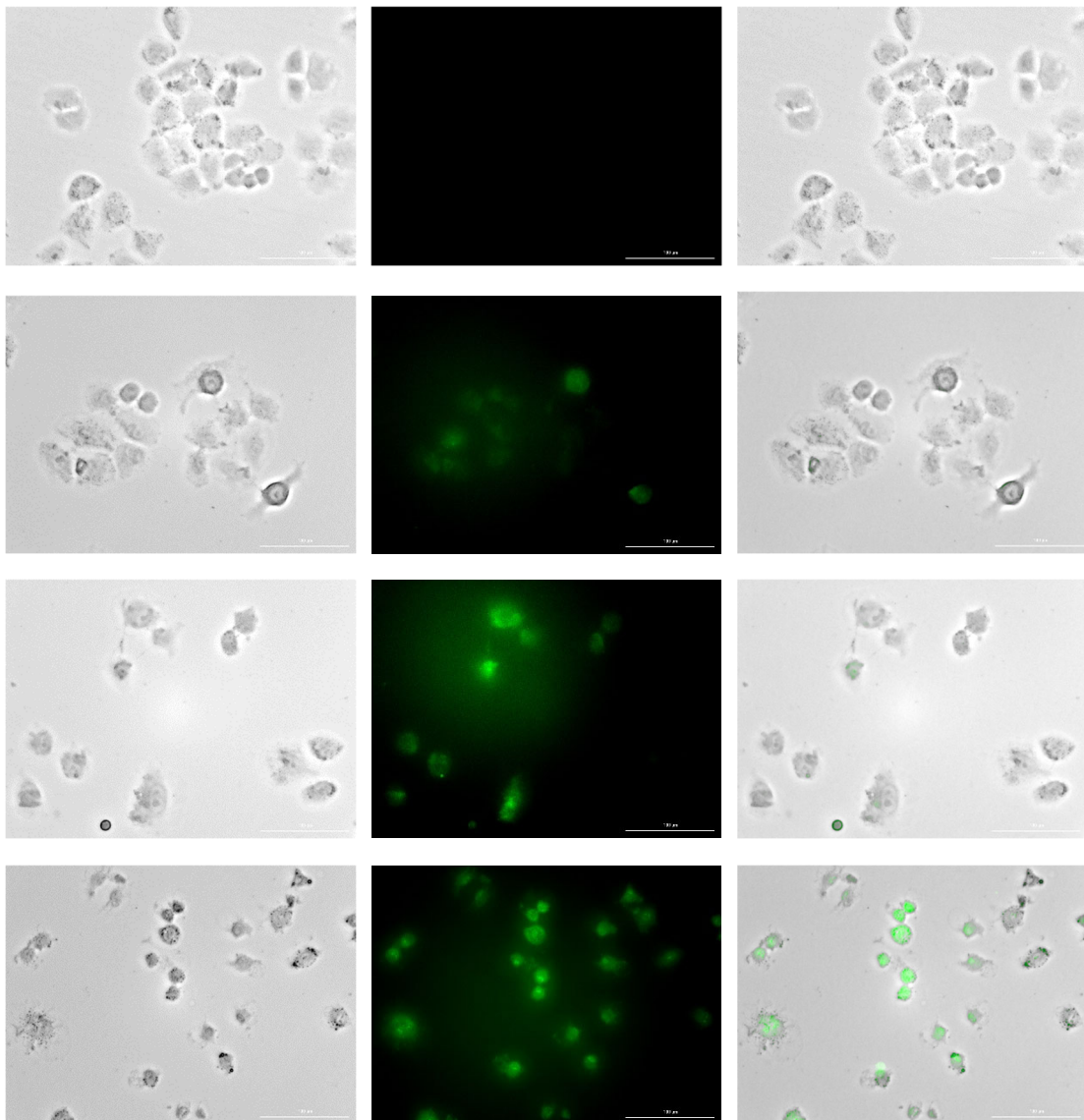


Fluorescence imaging raw data in Figure 2A

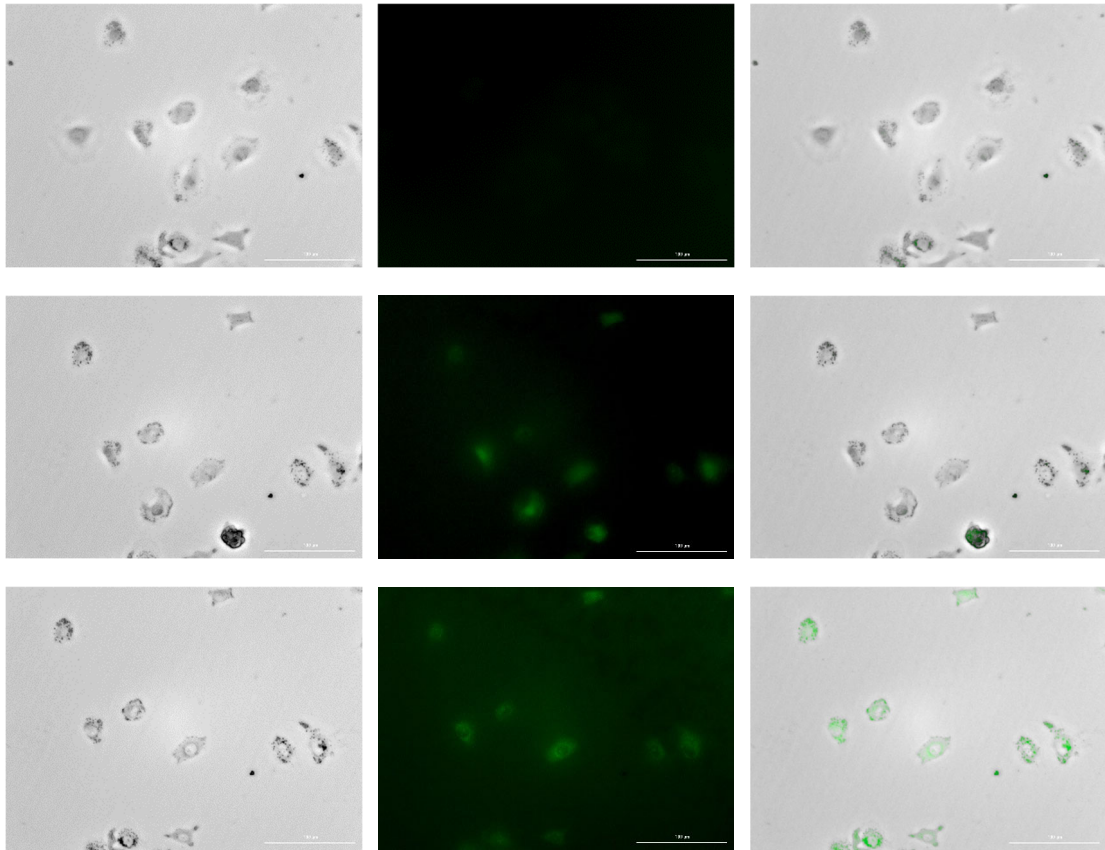




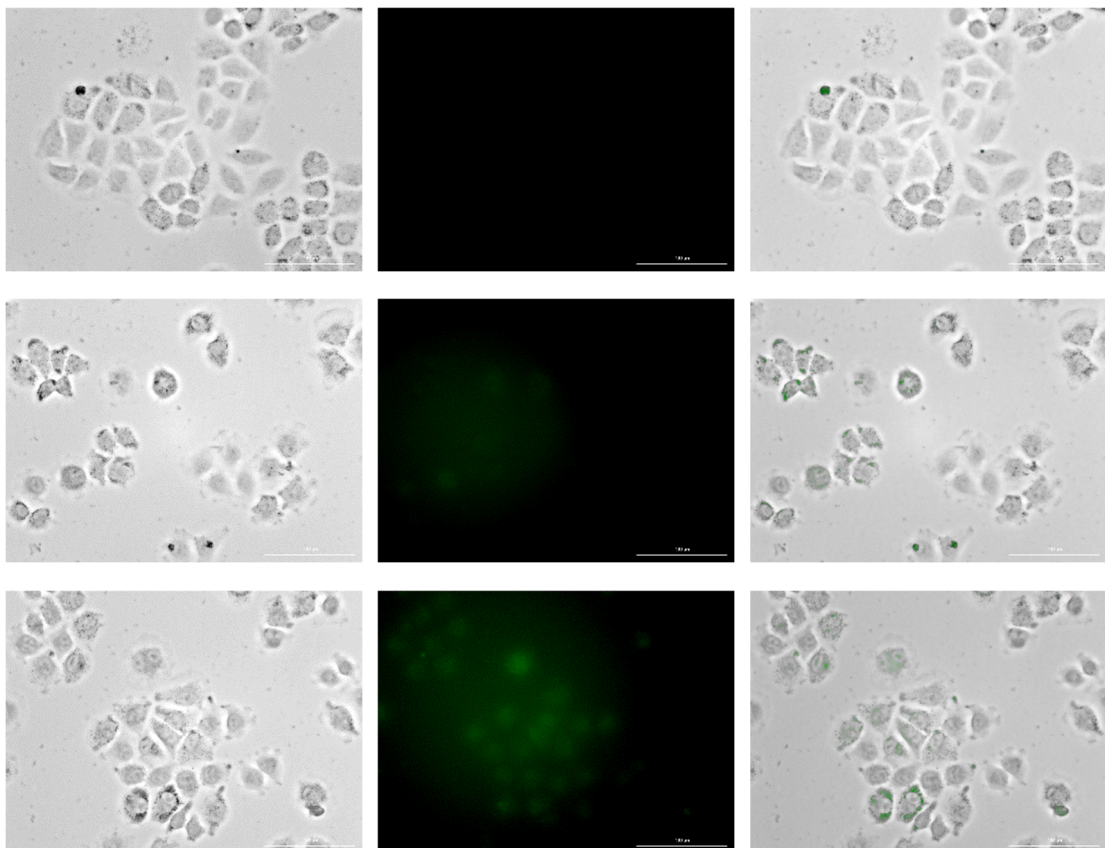
Fluorescence imaging raw data in Figure 2B

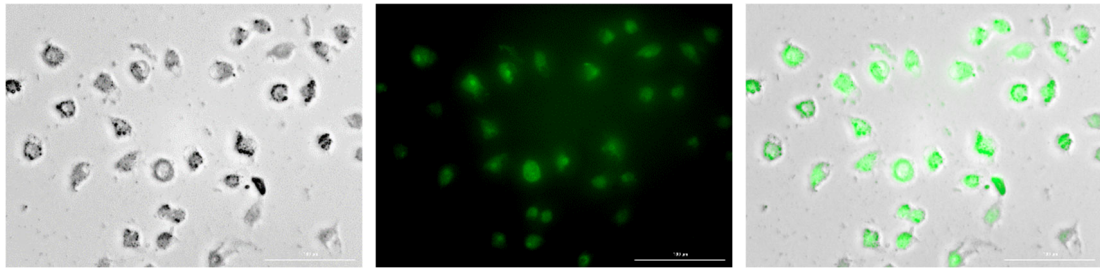


Fluorescence imaging raw data in Figure 2C

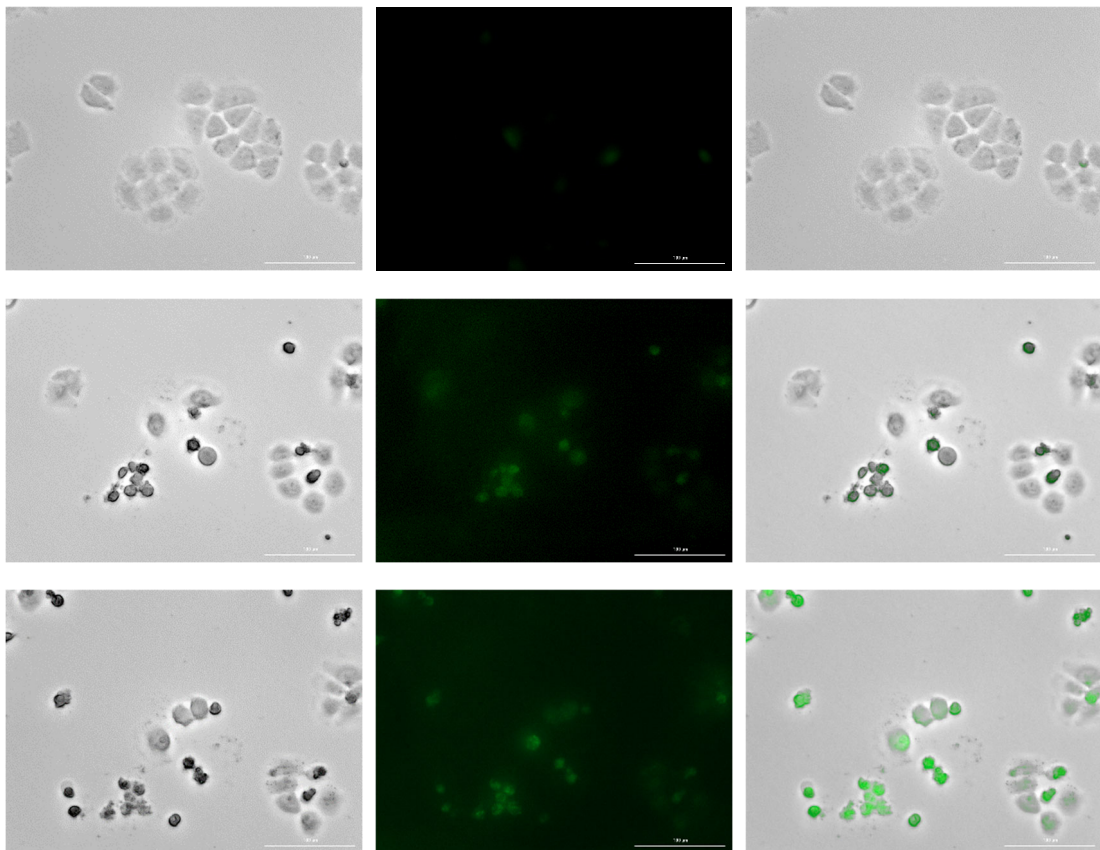


Fluorescence imaging raw data in Figure 2D





Fluorescence imaging raw data in Figure 2E

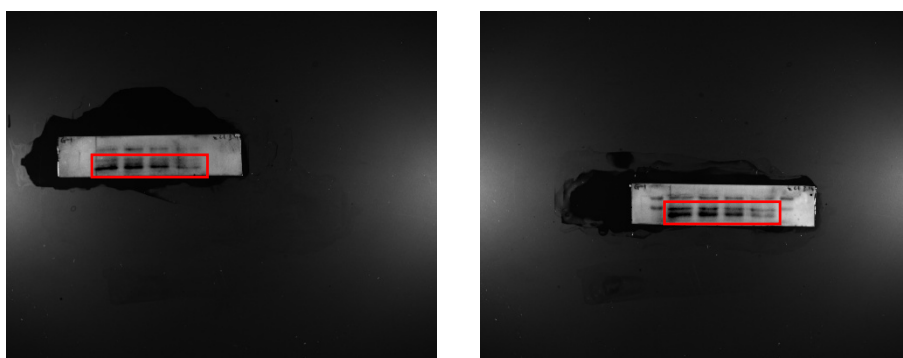


Fluorescence imaging raw data in Figure 2F

Full and uncropped western blots



Western blot raw data in Fig. 3G





Western blot raw data in Fig. 3I