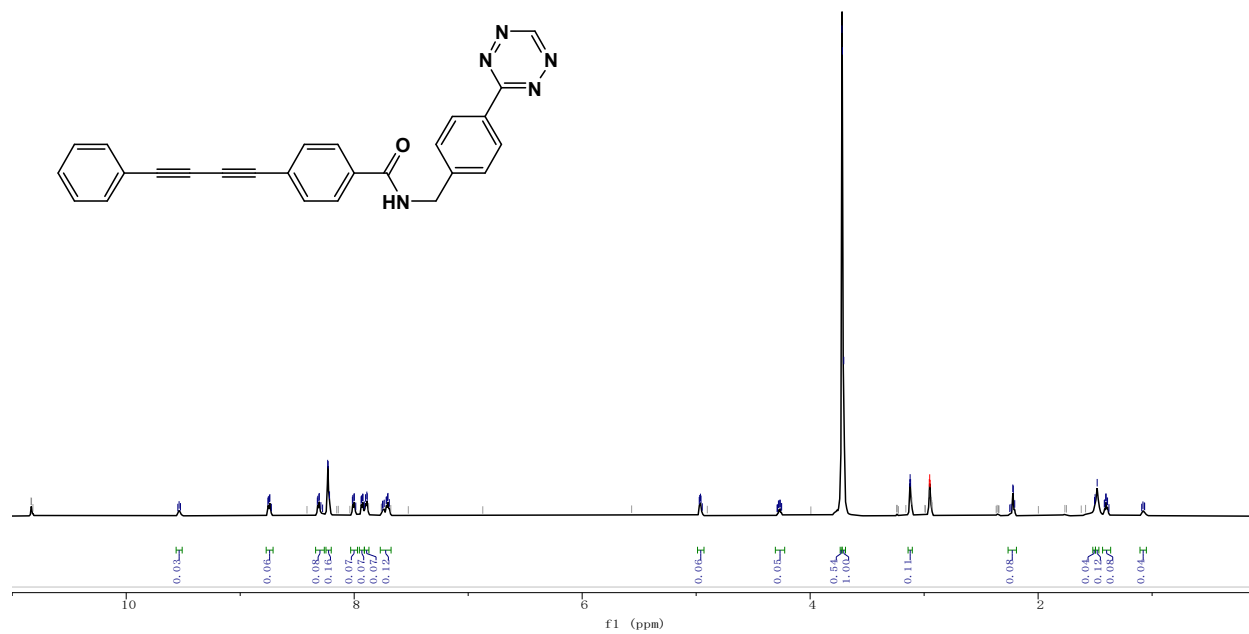
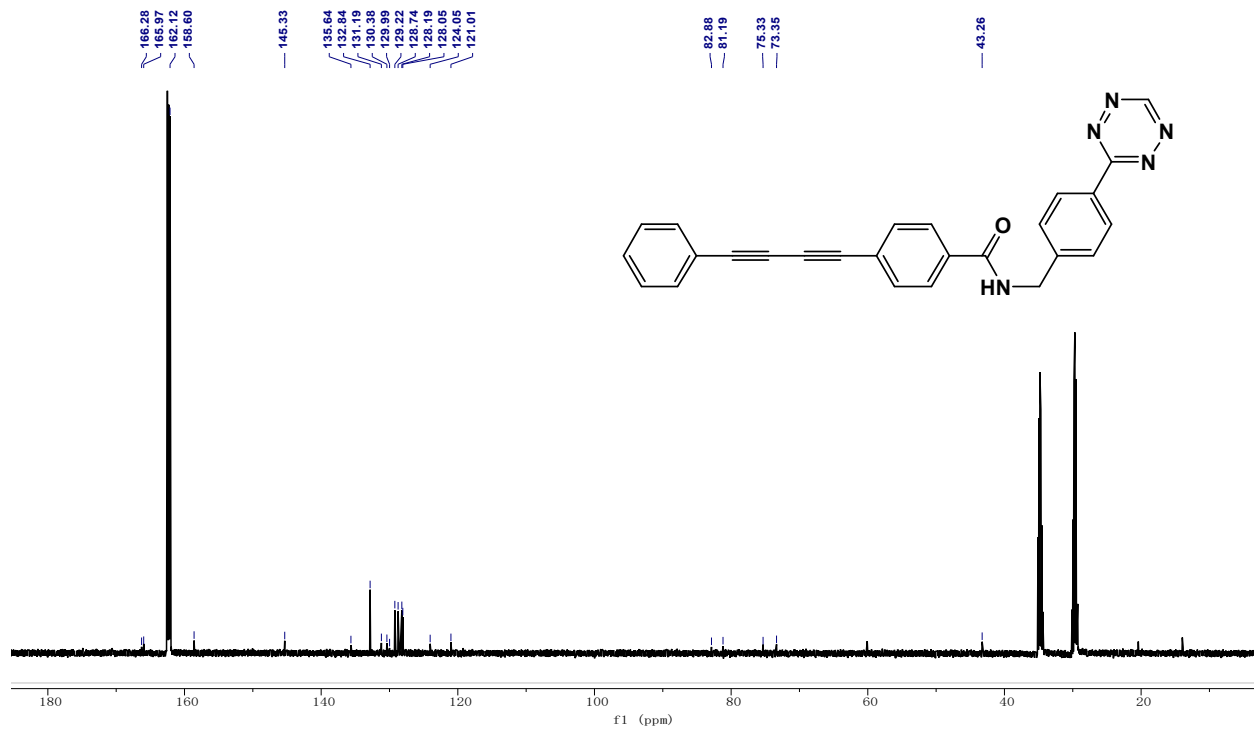


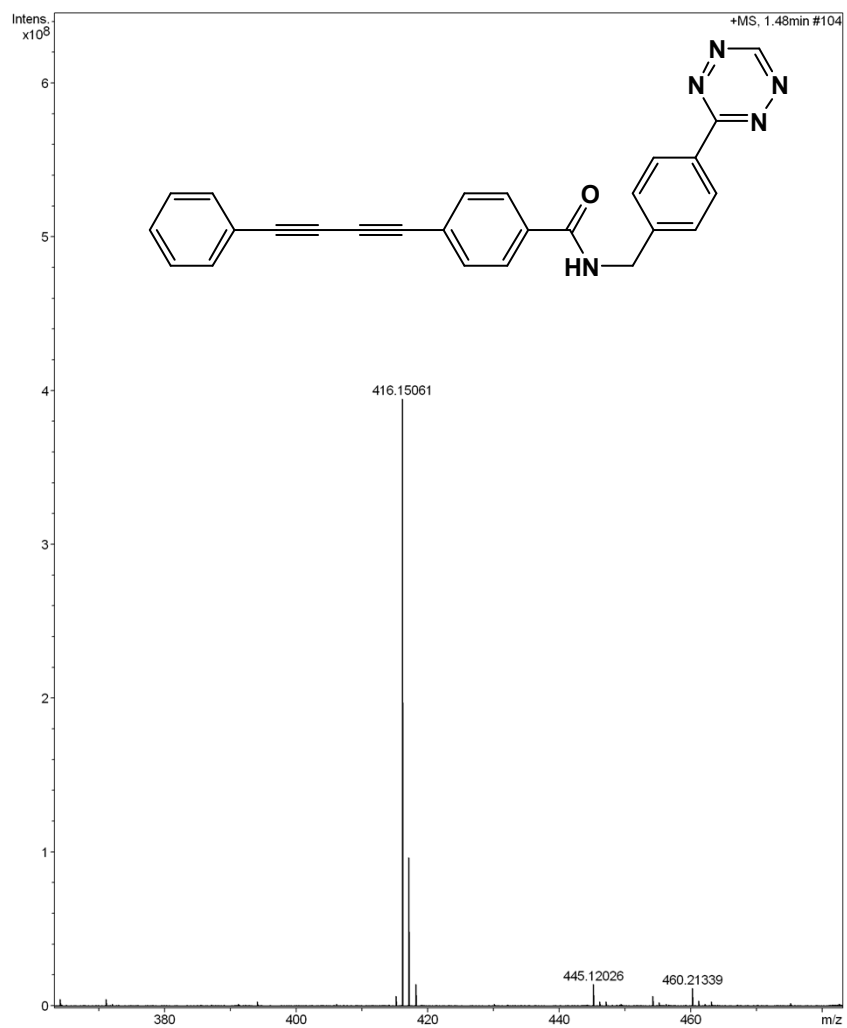
Supplementary Figures



Supplementary Fig. 1. ¹H NMR spectrum of 1.

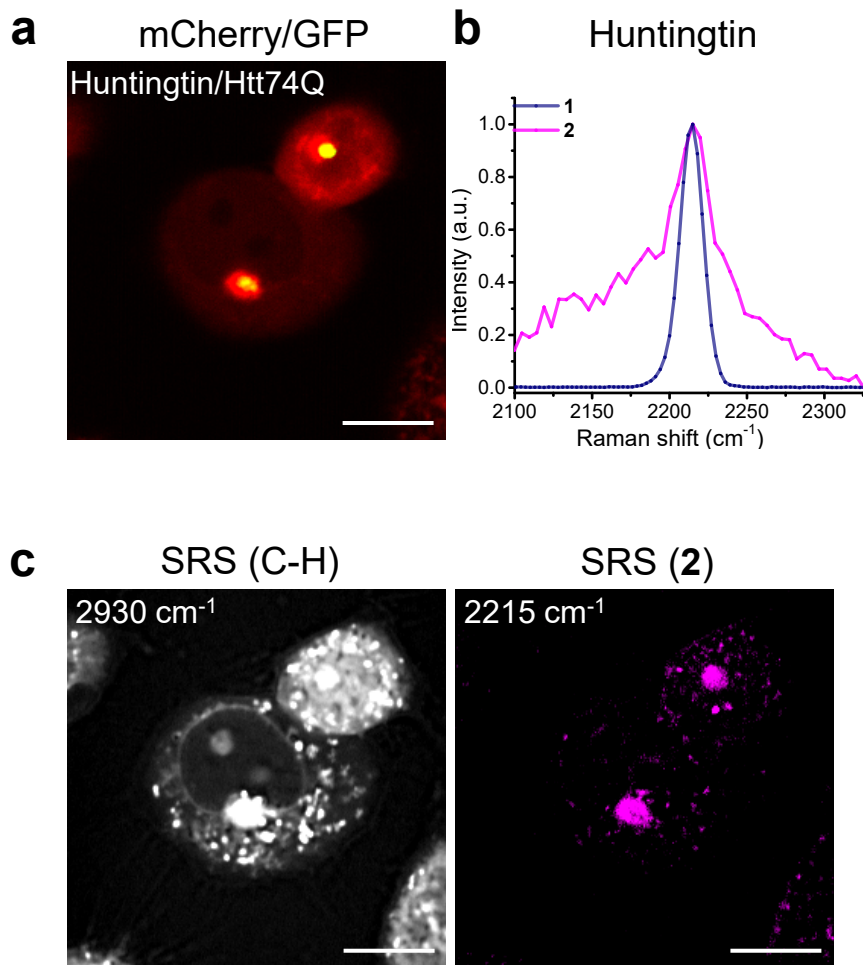


Supplementary Fig. 2. ¹³C NMR spectrum of 1.

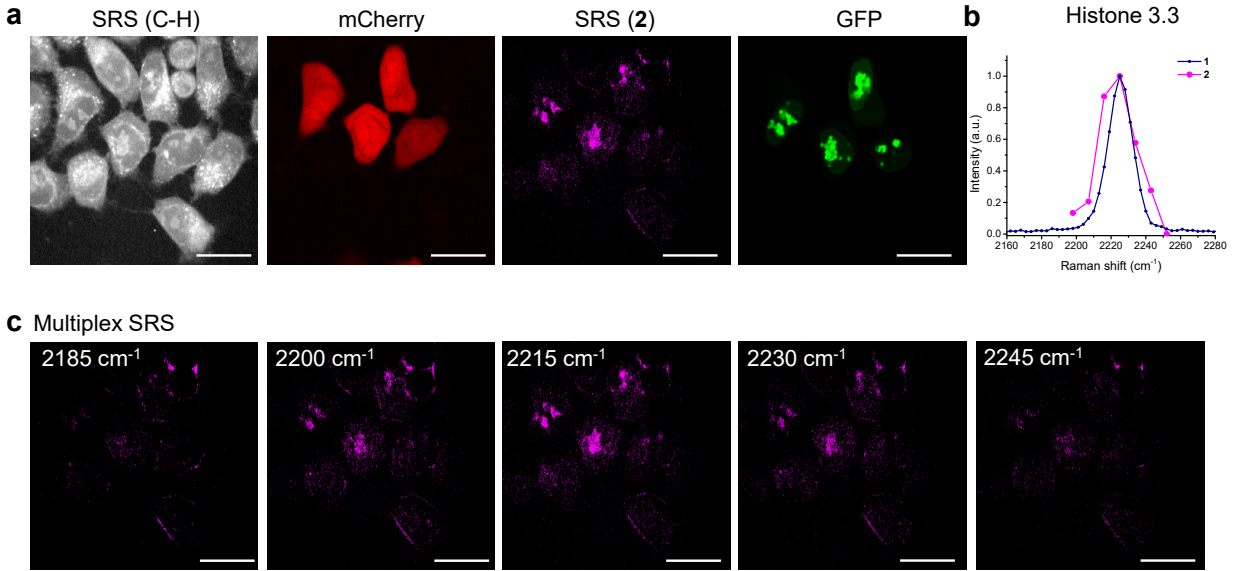


Supplementary Fig. 3. FT-MS spectrum of 1.

Supplementary Figure 4. A schematic illustration of the instrumental setup of the SRS imaging system. DM: dichroic mirror; GM: galvanometer; EOM: electro-optic modulator; PD: photodiode; F: optical filters.



Supplementary Figure 5. Supplementary images of targeted Huntingtin proteins. **a.** The merged TPEF image of mCherry and EGFP (yellow). **b.** SRS spectra of Raman tag **2** targeted to Huntingtin proteins. Pure compound of **1** is shown as reference. **c.** SRS imaging of CH vibrations (2930 cm^{-1}) and Raman reporters (2215 cm^{-1}) targeted Huntingtin proteins in living HeLa cells. Scale bar: $15 \mu\text{m}$.



Supplementary Figure 6. Multiplex SRS imaging of Histone 3.3 proteins. **a.** SRS and TPEF imaging of Histone 3.3 proteins. **b.** Multiplex SRS spectra of **2** targeted to Histone 3.3 proteins. **c.** Multiplex SRS image stacks, which show the Raman reporters in EGFP-Histone 3.3 in HeLa cells. Scale bar: 15 μ m.