**Electronic supplementary information**

# Quantification of azide groups on a material surface and a biomolecule using a clickable and cleavable fluorescent compound

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## Experimental Procedures

## Results

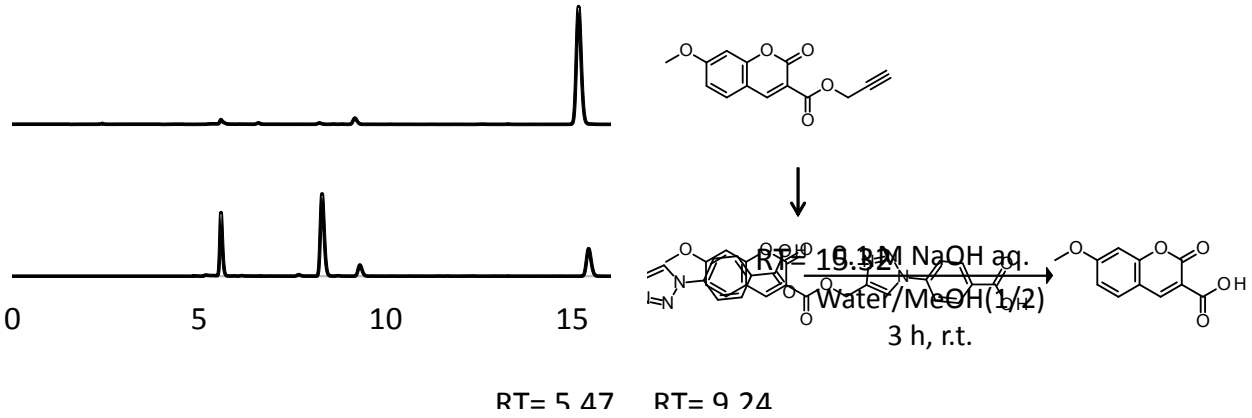


Fig. S1 HPLC profiles of C≡C–CMRN before and after the click reaction with azidobenzoic acid.

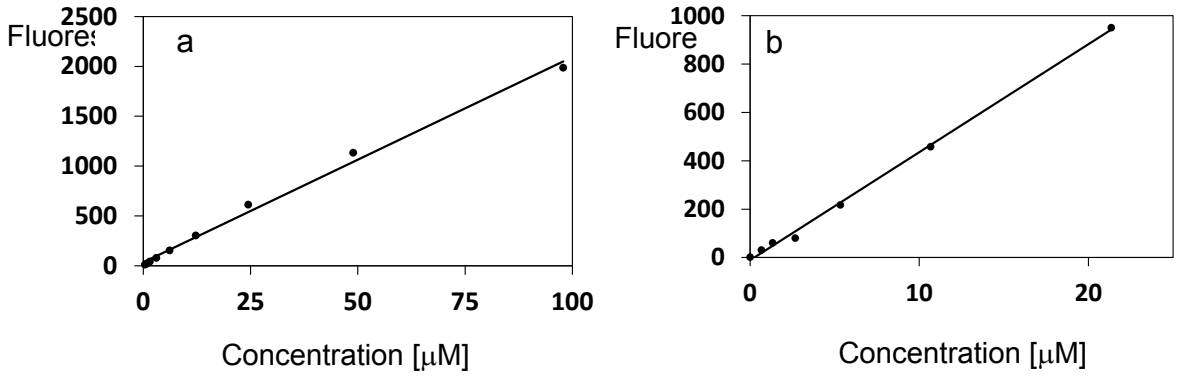


Fig. S2 Standard curves of CMRN fluorophore liberated from C≡C–$EG_3$–CMRN. (a) In phosphate buffer (0.1 M, pH 8). (b) In $NaHCO_3$ buffer (0.1 M, pH 8) containing azidated β-casein. The sensitivity of a fluorometer was set at low.

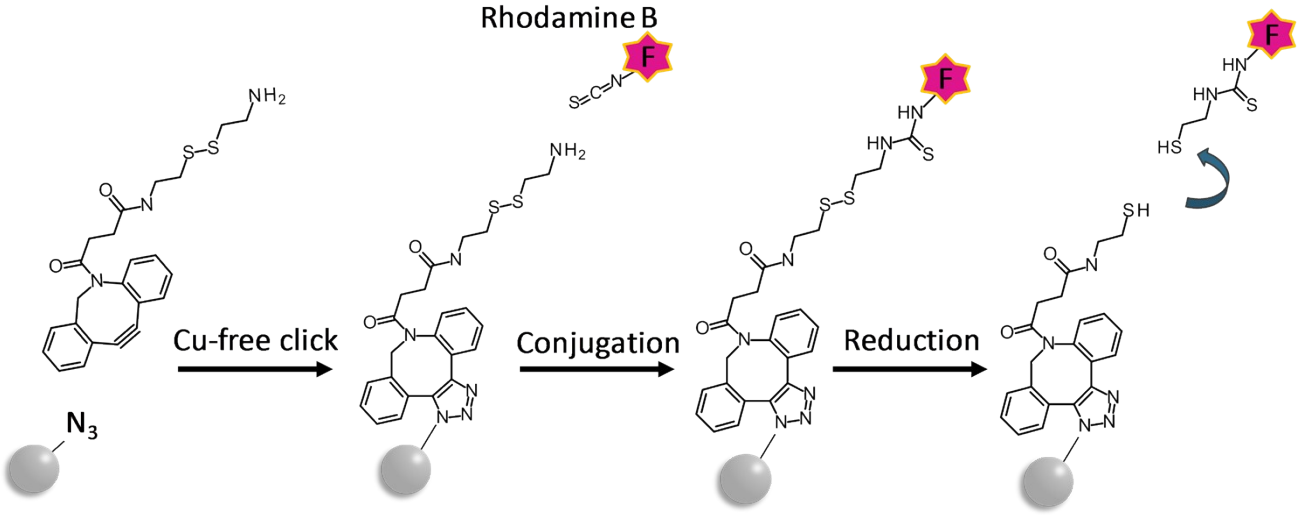


Fig. S3 Schematic illustration of the quantification of azide groups on resin surfaces using a Cu-free click reaction (strain-promoted azide–alkyne cycloaddition). Rhodamine B isothiocyanate (RITC) was used as an isothiocyanated fluorophore and tris(2-carboxyethyl)phosphine as used as a reducing agent.

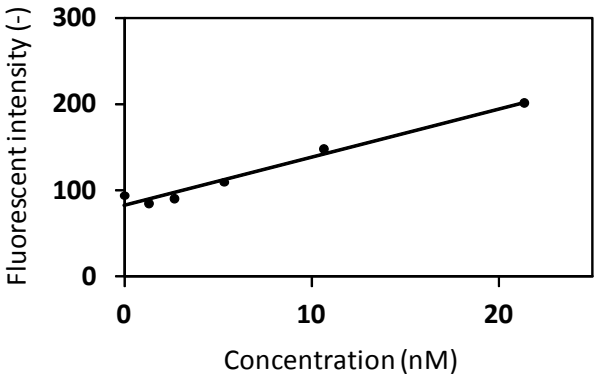


Fig. S4 Standard curve for the low concentrations of CMRN fluorophore liberated from C≡C–$EG_3$–CMRN in phosphate buffer (0.1 M, pH 8). The sensitivity of a fluorometer was set at high.

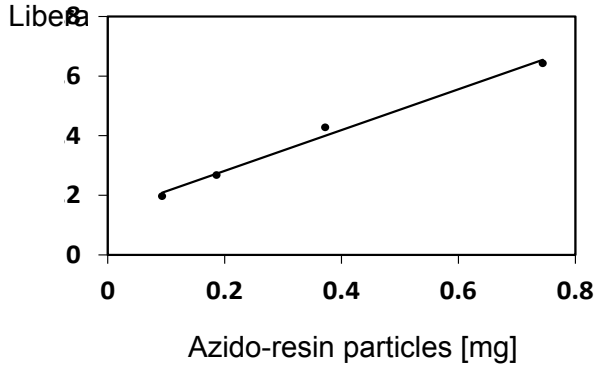


Fig. S5 Quantification of the azide groups on the resin particles using DBCO-S-S-amine and FITC. The sensitivity of a fluorometer was set at low.