Supplements

S1:

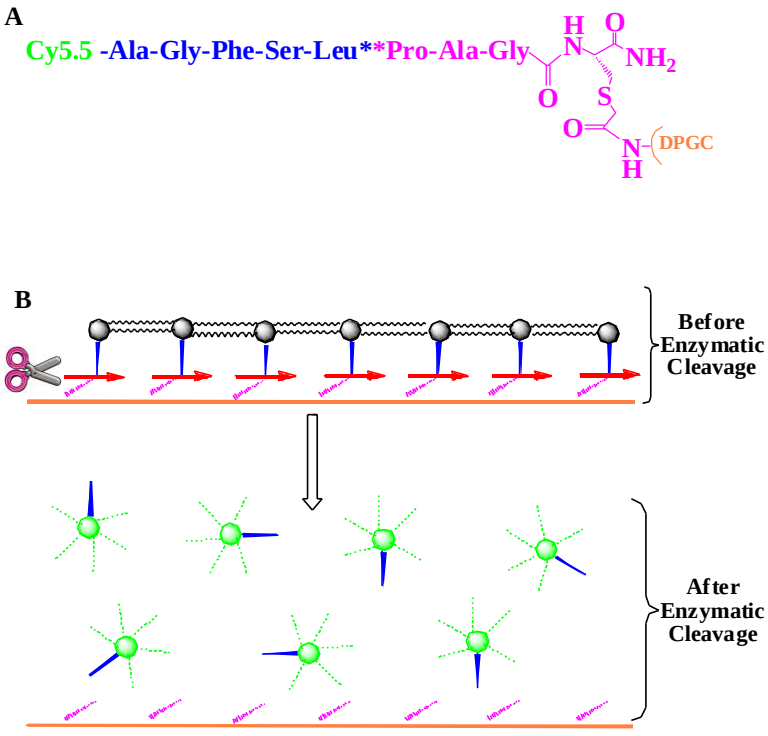

Fig S1: (**A**) General structure of the intramolecular quenched probe ***a***; (**B**) Schematic diagram of enzymatic activation of the probes. Fluorochromes are covalently coupled to a poly-D-lysine backbone (orange line) sterically protected by methoxy-polyethyleneglycol via a Cath E selective peptide substrate (pink and blue wedges). Due to the close proximity of the fluorochromes (gray balls), autoquenching occurs so that almost no fluorescent signal could be detected in the non-activated state. After cleavage of the peptide spacer at the scissile bond (between pink and blue wedges) by Cath E (red arrows), fluorochromes are released from the carrier and become brightly fluorescent (green balls).

Table S2. Characterization of probes

Imaging Probe	Average Peptide Loading per DPGC	Relative Quenching Efficiency, %
a	23	95
b	21	96