A new peptide-based fluorescent probe selective for zinc (II) and copper (II)

Giuliana Donadio[a], Rita Di Martino[a], Rosario Oliva[b], Luigi Petraccone[b], Pompea Del Vecchio[b], Blanda Di Luccia[a], Ezio Ricca[a], Rachele Isticato[a], Alberto Di Donato[a] and Eugenio Notomista[a]*

[a] Department of Biology University of Naples Federico II, Via Cintia, 80126, Naples, Italy.

[b] Department of Chemistry University of Naples Federico II, Via Cintia, 80126, Naples, Italy

*Corresponding author (notomist@unina.it)

Electronic supplementary information (ESI)

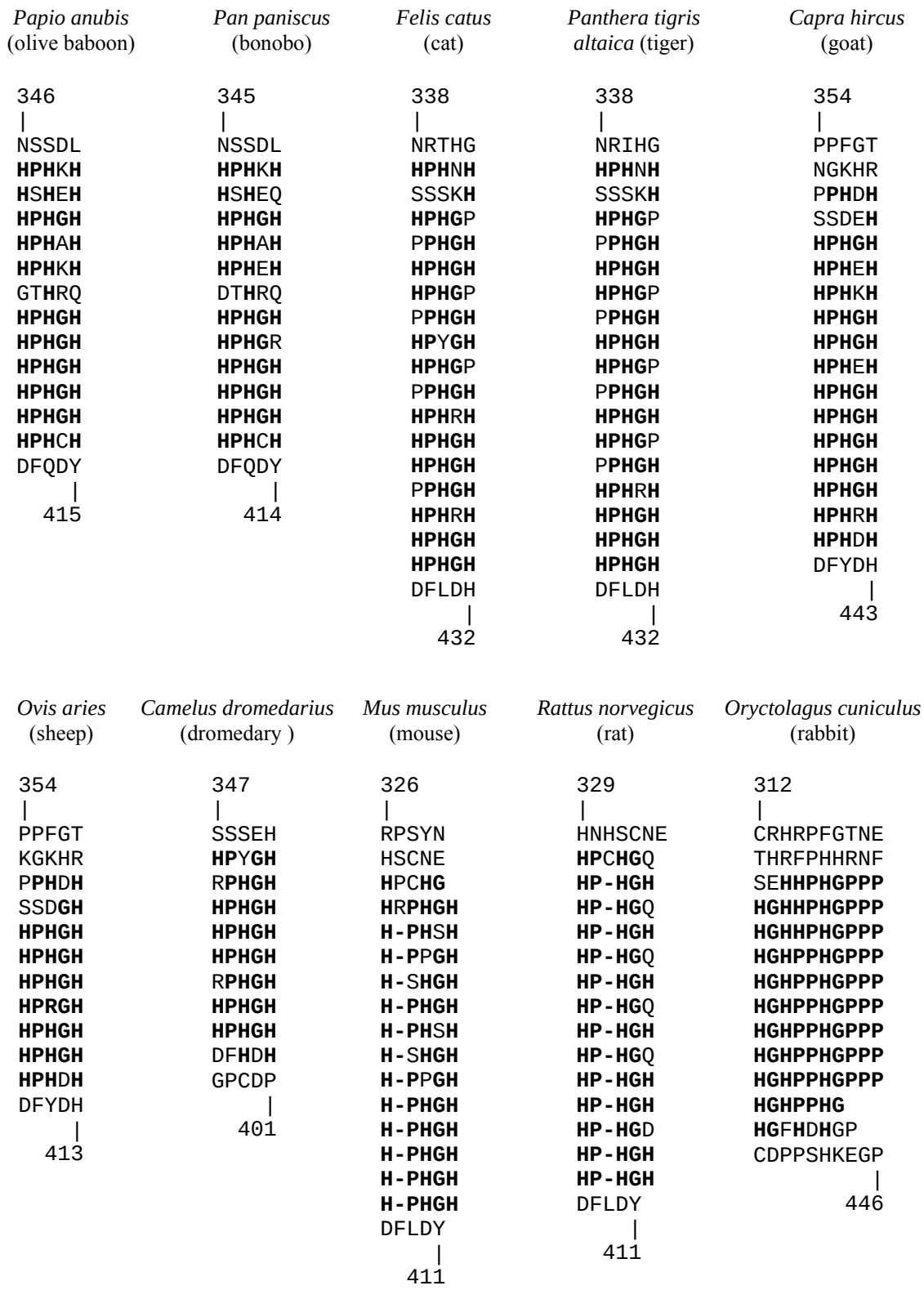

Fig. S1. Histidine rich regions of histidine rich glycoproteins from several mammals. Sequence is shown in blocks of five residues to highlight the repeats HPHGP except in the case of the rabbit HRG where a 10-residue repeat was identified [HGH(P/H)PHGPPP]. Conserved amino acids are in bold. Residue numbers refers to the precursors of the HRGs.

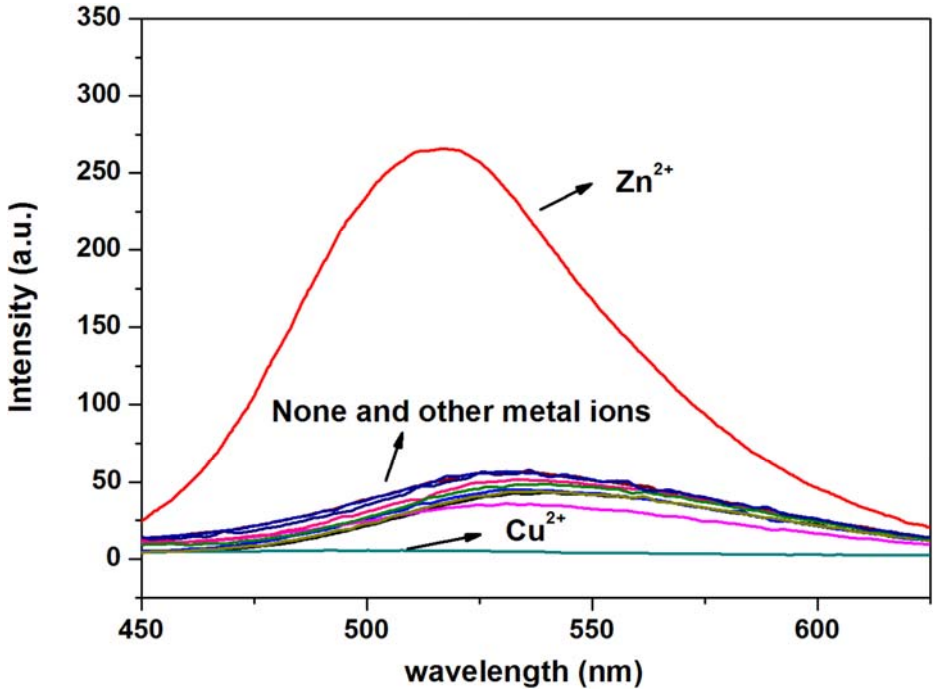

Fig. S2. Fluorescence emission spectra of dH3w (10 μM) in the presence of Zn^{2+}, Co^{2+}, Pb^{2+}, Cd^{2+}, Ni^{2+}, Mn^{2+}, Cu^{2+}, Fe^{2+}, Fe^{3+}, Ca^{2+}, Mg^{2+}, K^{+} or Na^{+} (50 μM) after excitation at 340 nm.

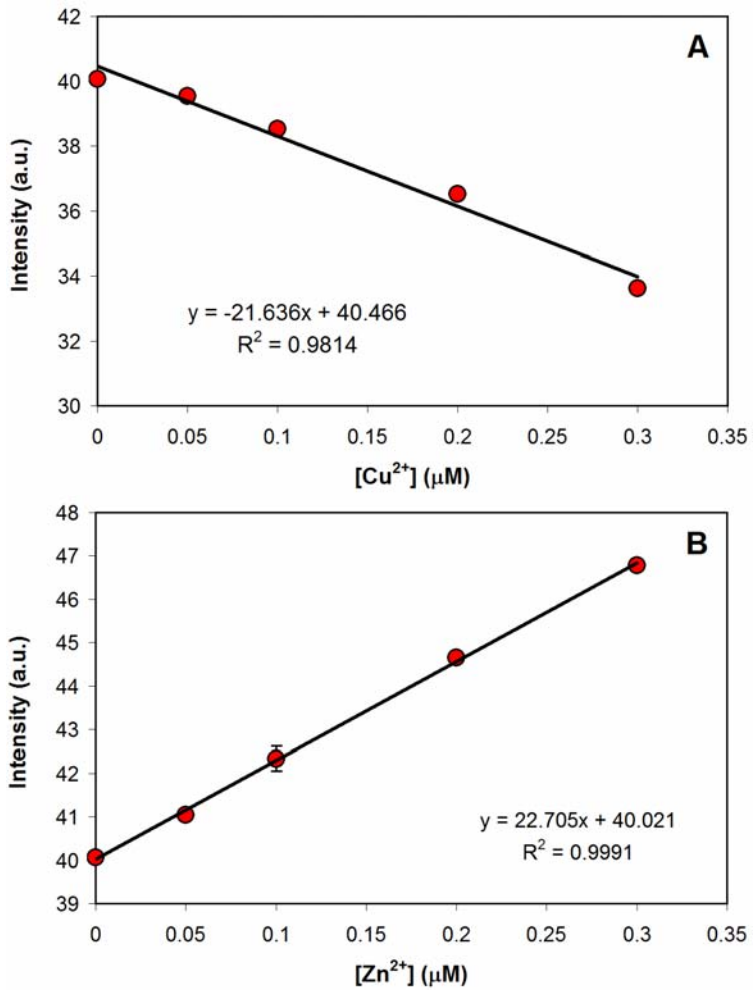

Fig. S3. Linear correlation between fluorescence intensity of dH3w and the concentration of Cu^{2+} (A) or Zn^{2+} (B). Error bars are shown only when larger than the symbol.

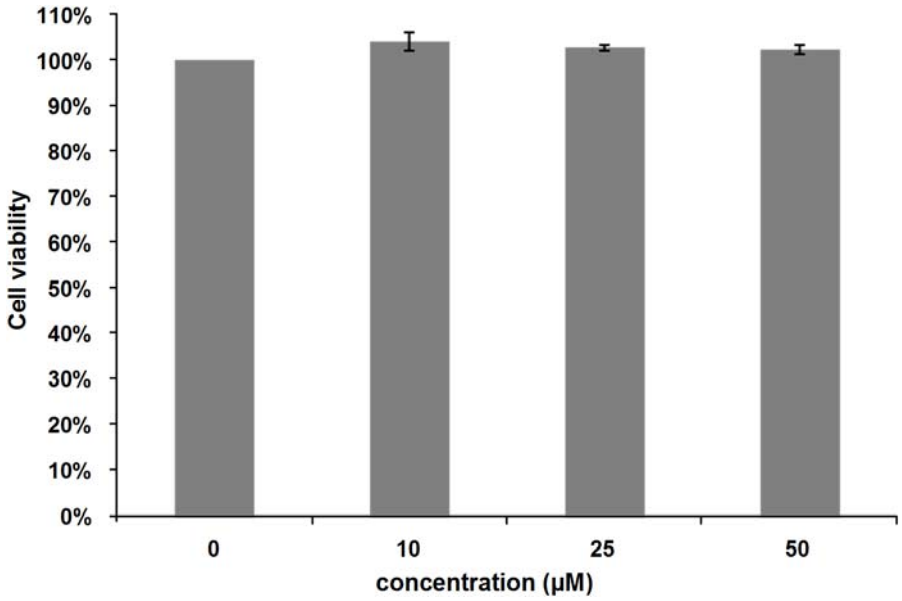

Fig. S4. Cell viability of HeLa cells cultured in DMEM medium supplemented with dH3w (10-50 μM) for 24 hours. Cell viability was determined by measuring the absorbance at 490 nm after 2 hours of incubation with AQ_{UEOUS} One Solution Reagent (Promega, Madison, WI).