Supporting Information

Polyfluorene Based Bioconjugates for Selective Detection of Ferritin in Normal and Cancer Human Blood Serums

Priyanka Dutta,[†] Niranjan Meher,[†] Akhtar Hussain Malik,[†] Bhaben Choudhury,^τ Parameswar Krishnan Iyer^{*†‡}

[†]Department of Chemistry and ‡Centre for Nanotechnology, Indian Institute of Technology Guwahati, Guwahati 781039, India.

^tDepartment of ENT, Sanjevani Hospital, Guwahati-781011, India.

FAX: +913612582349; E-mail*: pki@iitg.ac.in



Figure S1: ¹H NMR spectra of M1.



Figure S2: ¹³C NMR spectra of M1



Figure S3: ¹H NMR spectra of M2.



Figure S4: ¹³C NMR spectra of M2.



Figure S5: ¹H NMR spectra of the polymer PFBT.



Figure S6: ¹H-NMR spectra of the polymer bioconjugate PFBT-A.



Figure S7: HRMS spectra of M2.



Figure S8: FT-IR spectra of the polymer bioconjugate PFBT-A.



Figure S9: PL intensity of PFBT-A (1 μ M) in different DMSO: HEPES mixtures. Inset: the enlarged portion of the curves from 40 % H₂O to 100 % H₂O.



Figure S10: HOMO-LUMO hybrid structures of the polymer bioconjugate PFBT-A. Theoritical Band Gap = 2.426 eV



Figure S11: Cyclic voltammogram of PFBT-A film recorded on glassy carbon electrode with a scan rate of 50 mV s⁻¹. The inset corresponds to the cyclic voltammogram of ferrocene.



Figure S12: Selectivity study of PFBT-A $(1 \ \mu M)$ in different amino acids $(1 \ \mu M)$. [Gly=glycine, Tyr=tyrosine, Leu=leucine, Ile=isoleucine, Lys=lysine, Val=valine, Ser=serine, Cys=cysteine, Ala=alanine, Trp=trptophan, Phe=phenylalanine, Met=methionine, Thr=threonine, Gln=glutamine, Arg=arginine].



Figure S13: PL detection limit plots of PFBT-A.



Figure S14: Pictures of the serum samples taken for study.



Figure S15: PL quenching of PFBT-A in presence of normal and cancer blood serums.