SUPPLEMENTARY INFORMATION

LUMINESCENT SILVER NANOCLUSTERS IN PROBING IMMUNOGLOBULINS AND SERUM ALBUMINS IN PROTEIN MIXTURES

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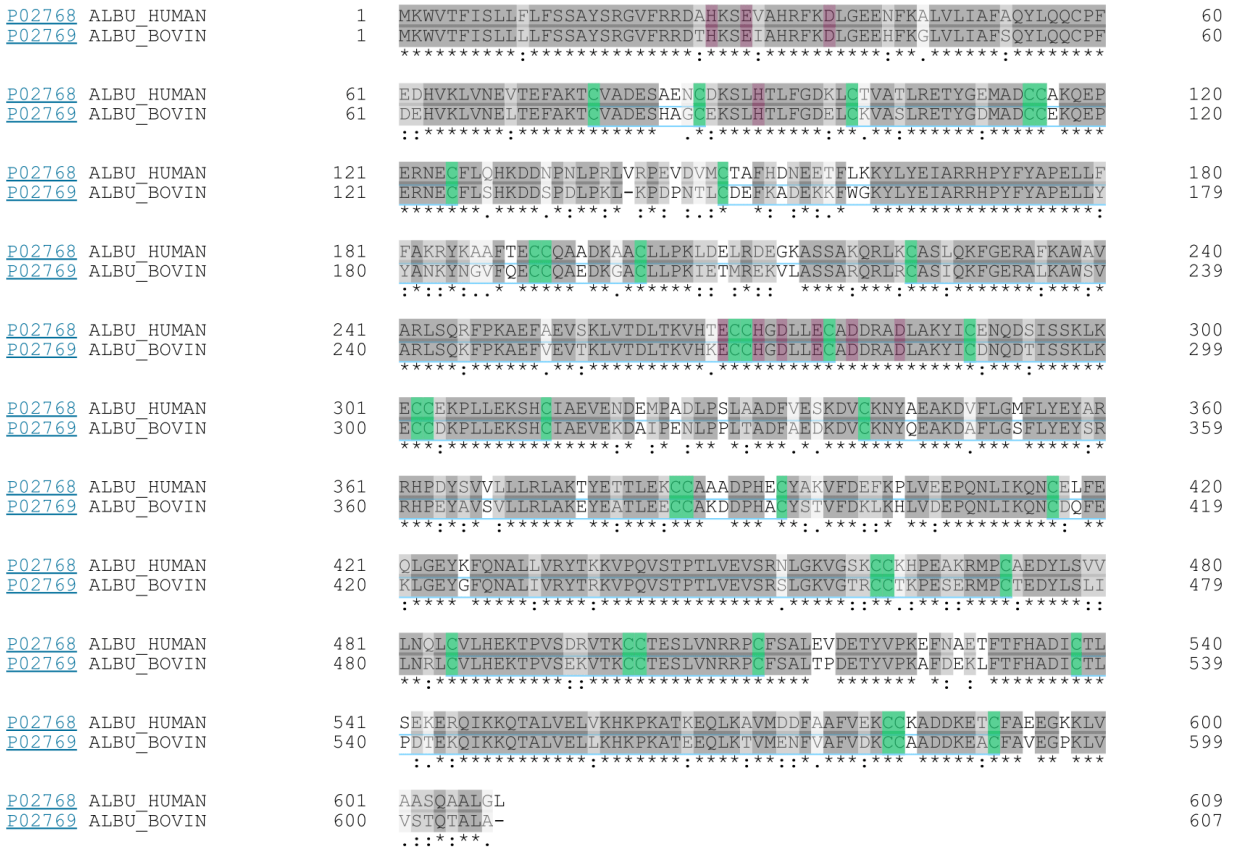

Figure S1. Aligned sequences of Human (top) and Bovine (bottom) serum albumins with S-S bridges (green) and known metal binding sites (red) being marked. The scheme also indicates positions, which have: a single, fully conserved residue (* - 'asterisk', dark grey), conservation between groups of strongly similar properties (: - 'colon', light grey), and conservation between groups of weakly similar properties (. – 'period', white). The picture was obtained using Align instrument of UniProt Database (uniprot.org).

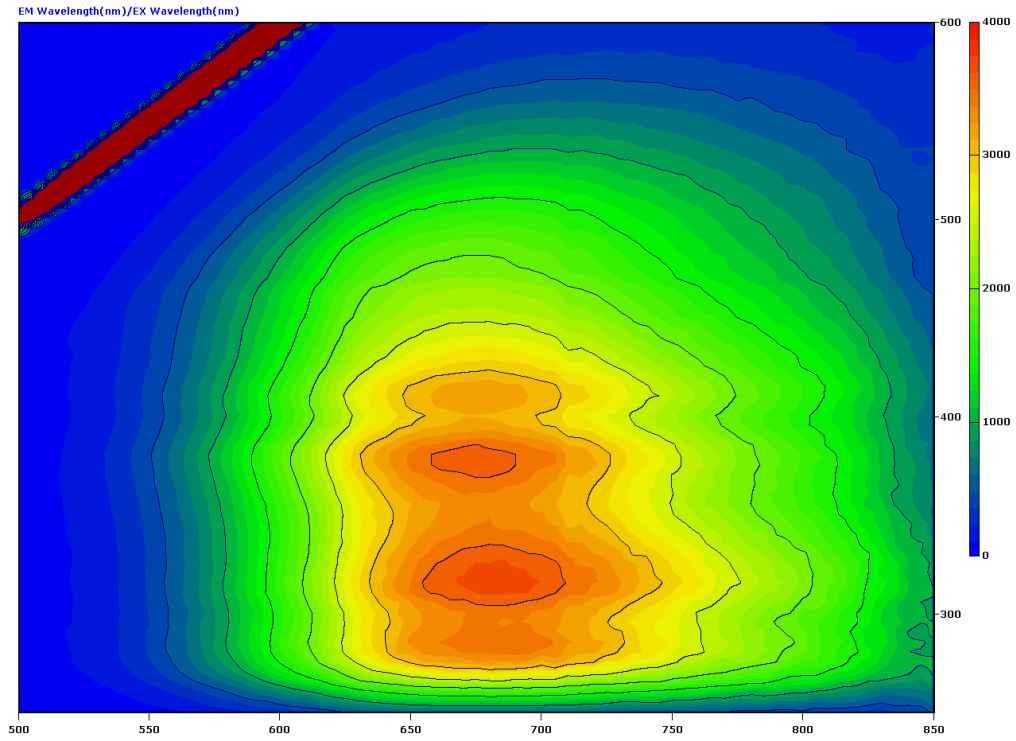

Figure S2. 2D fluorescence contour plot for the HSA-AgNCs complexes. (X-axis is emission and Y-axis is excitation).

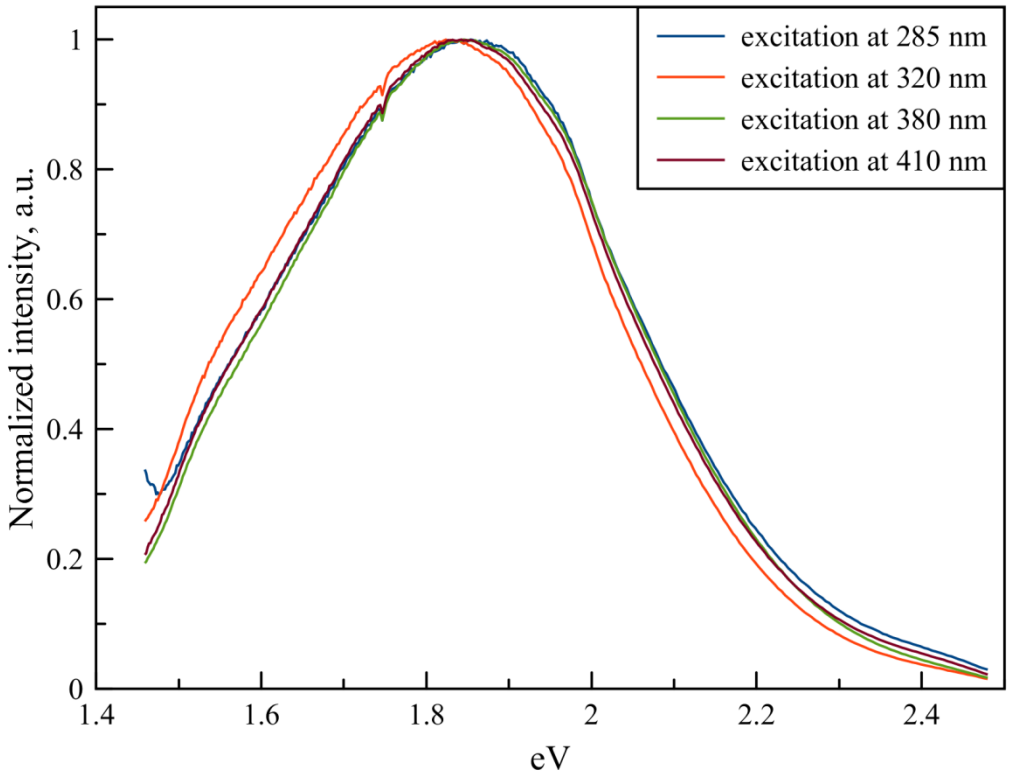

Figure S3. Normalized emission spectra of HSA-AgNCs complexes with different excitation wavelengths. The spectral band demonstrates two-component structure with a minor feature at 1.55 eV, which might be due to the manifestation of the vibrational structure in the spectra. However, the HSA-AgNCs spectrum (as well as other complexes) can be fitted reasonably well by single Gaussian curve, reflecting a dominating spectral feature, which is sufficient to compare the spectra.

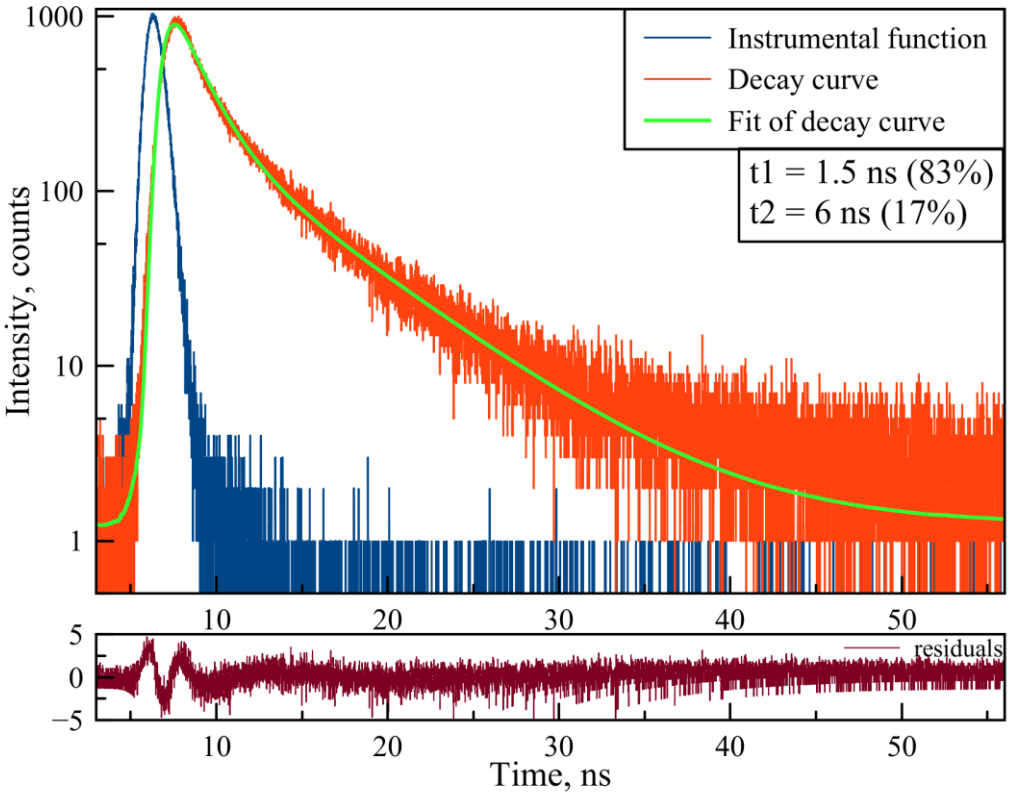

Figure S4. Fluorescence decay curve of the HSA-AgNCs complexes (λ_{ex} 390 nm, λ_{em} 670 nm). Fit: 0.83exp(-t/1.5) + 0.17exp(-t/6).

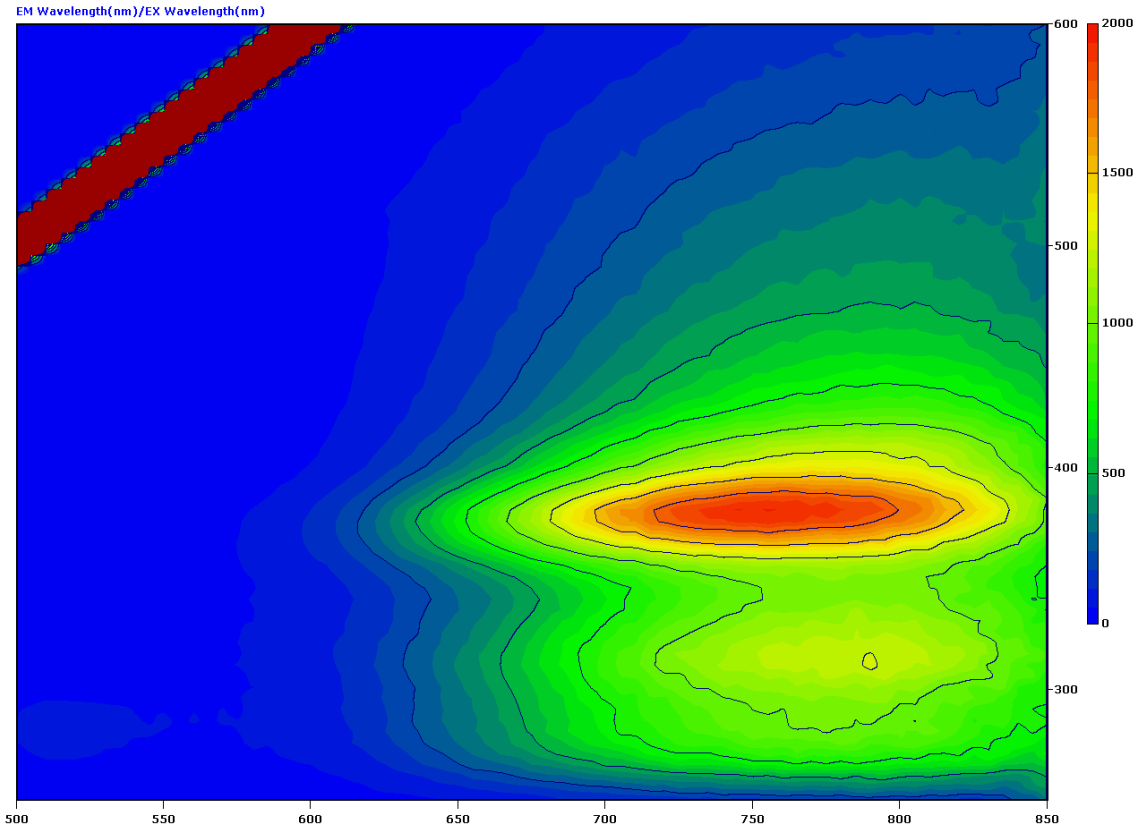

Figure S5. 2D fluorescence contour plot for the IgG-AgNCs complexes. (X-axis is emission and Y-axis is excitation).

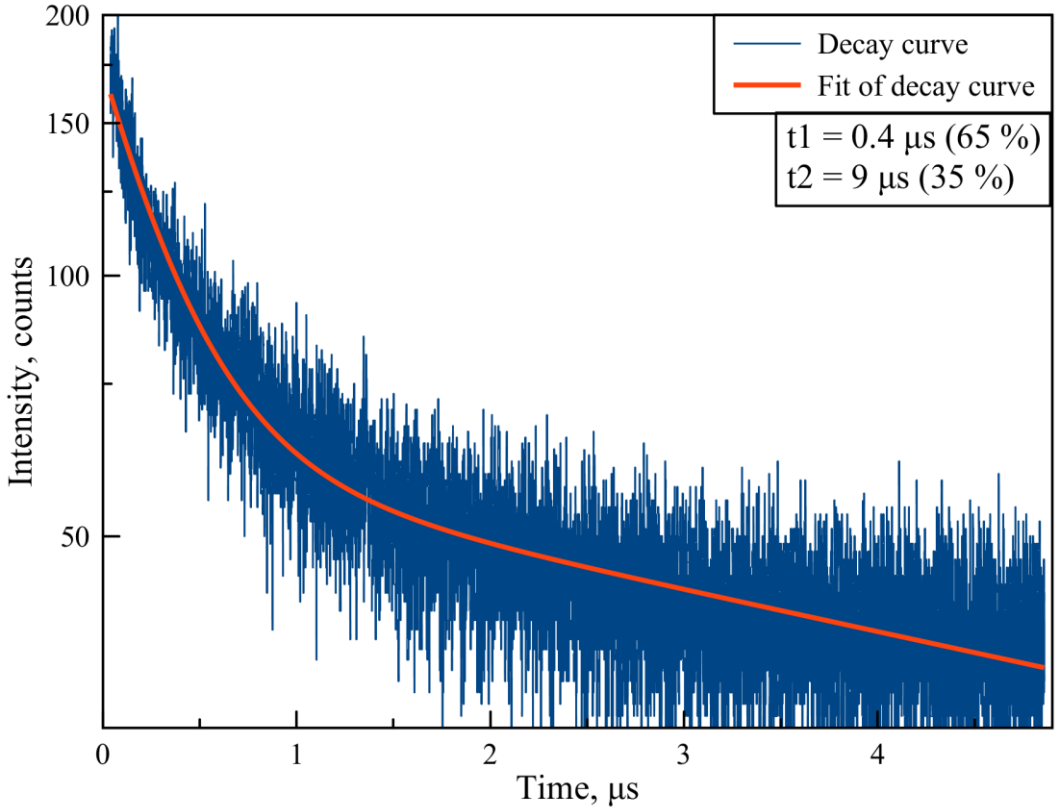

Figure S6. Fluorescence decay curve of the IgG-AgNCs complexes (λ_{ex} 390 nm, λ_{em} 760 nm). Fit: 0.65exp(-t/0.4) + 0.35exp(-t/9).

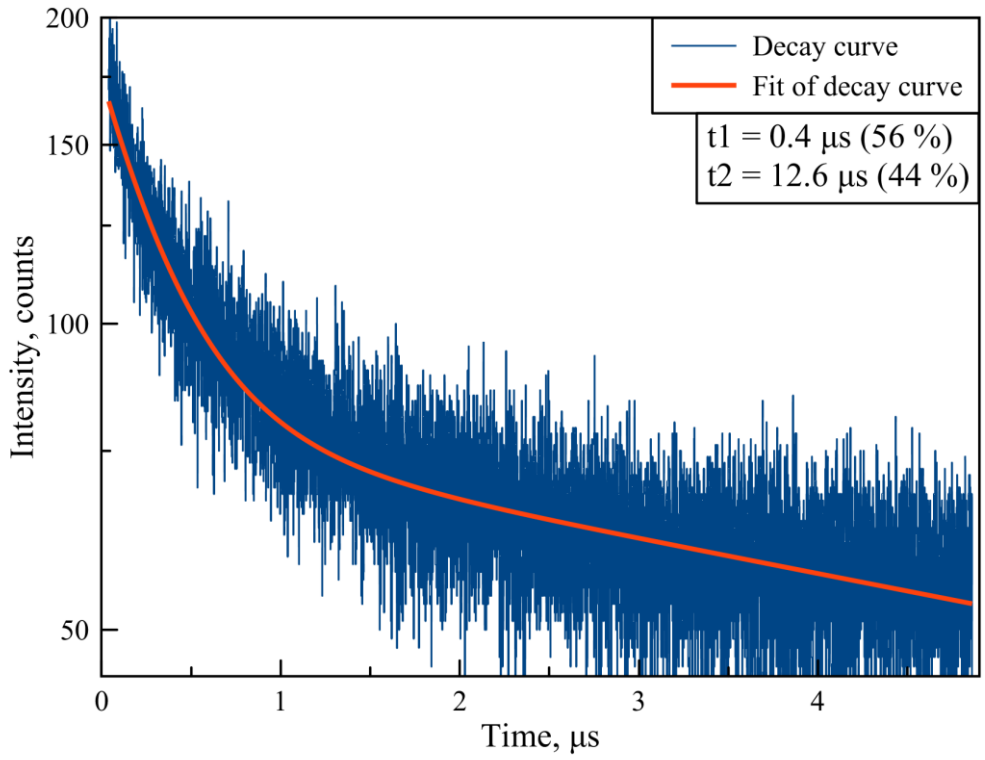

Figure S7. Fluorescence decay curve of the PGL-AgNCs complexes (λ_{ex} 390 nm, λ_{em} 750 nm). Fit: 0.56exp(-t/0.4) + 0.44exp(-t/12.6).

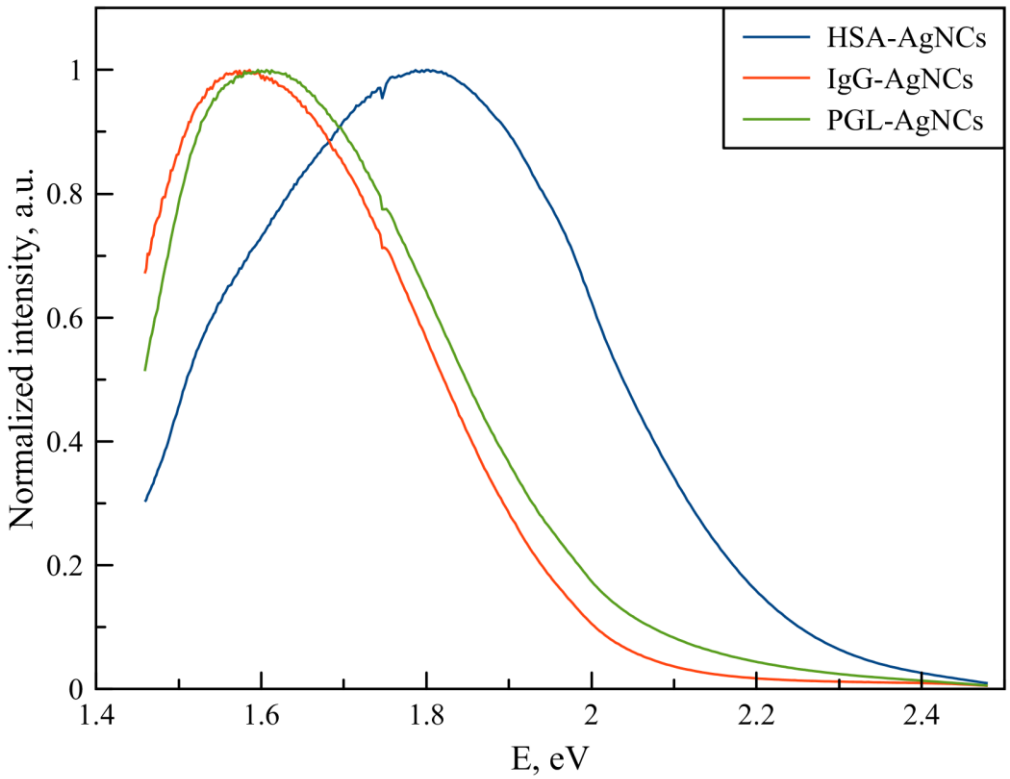

Figure S8. Emission spectra (excitation at 380 nm) of obtained complexes.

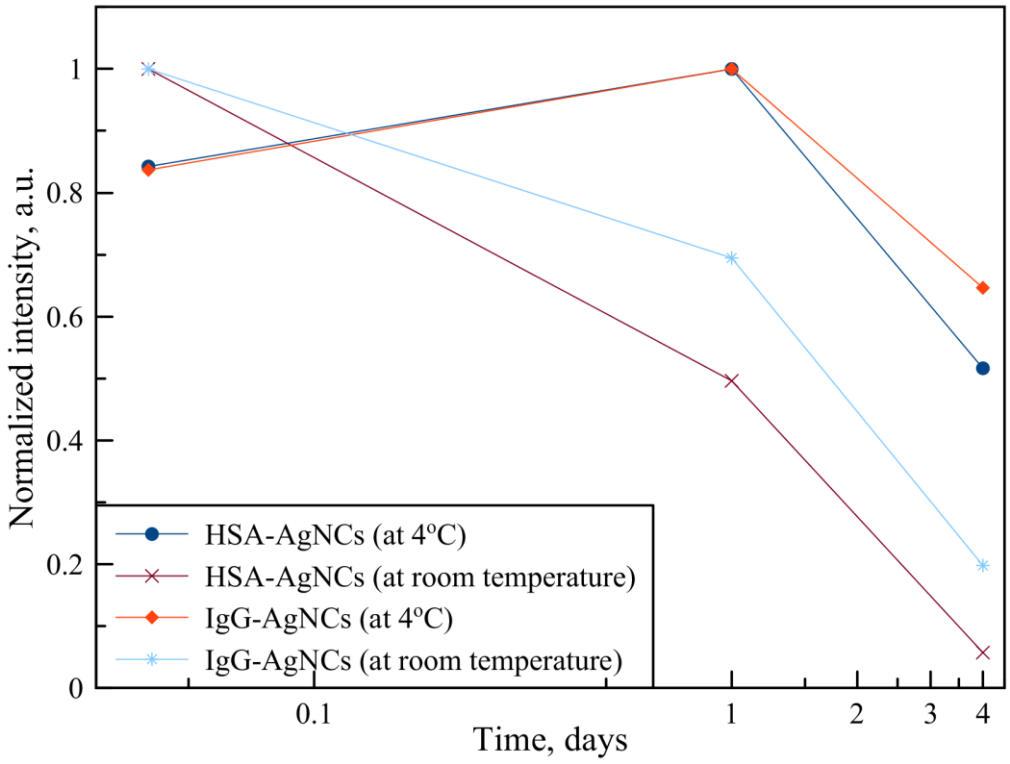

Figure S9. Dependence of the fluorescence intensity of the complexes on time at room temperature and at +4°C.

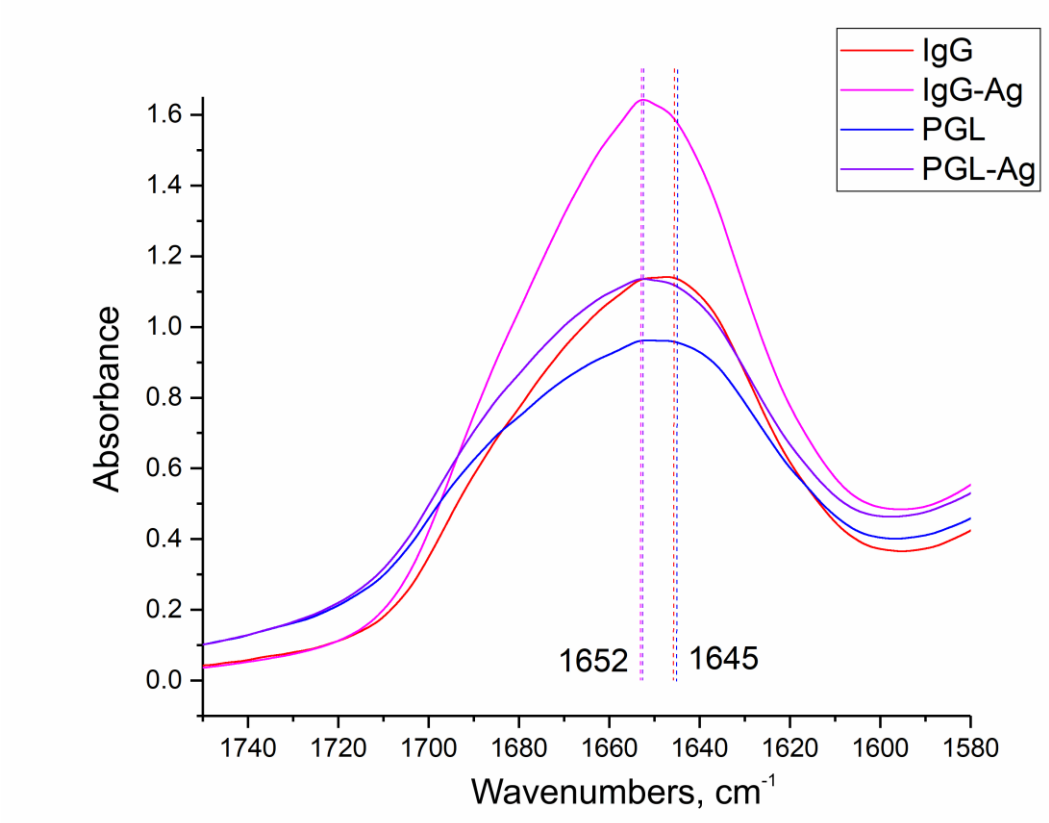

Figure S10. FTIR spectra in the region of Amide I band of IgG, pentaglobin and their complexes with AgNC. FTIR spectra of KBr pellets were registered using Tensor 27 spectrometer (Bruker), equipped with MCT detector.

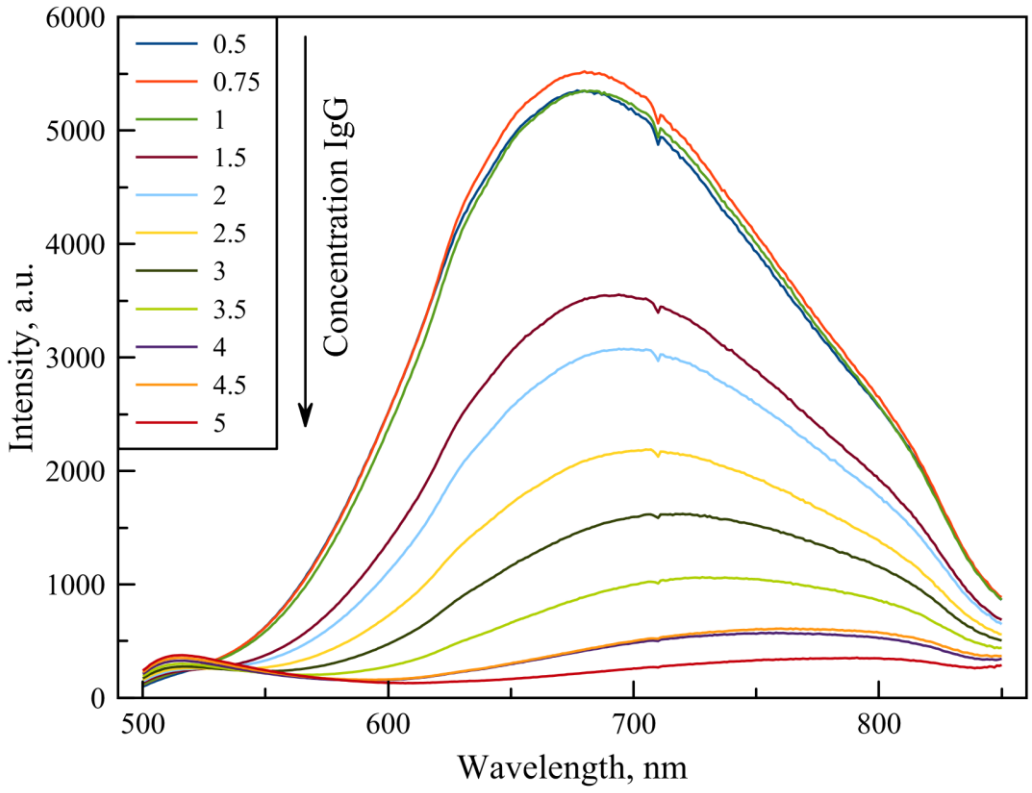

Figure S11. Emission spectra of HSA/IgG-AgNCs complexes.

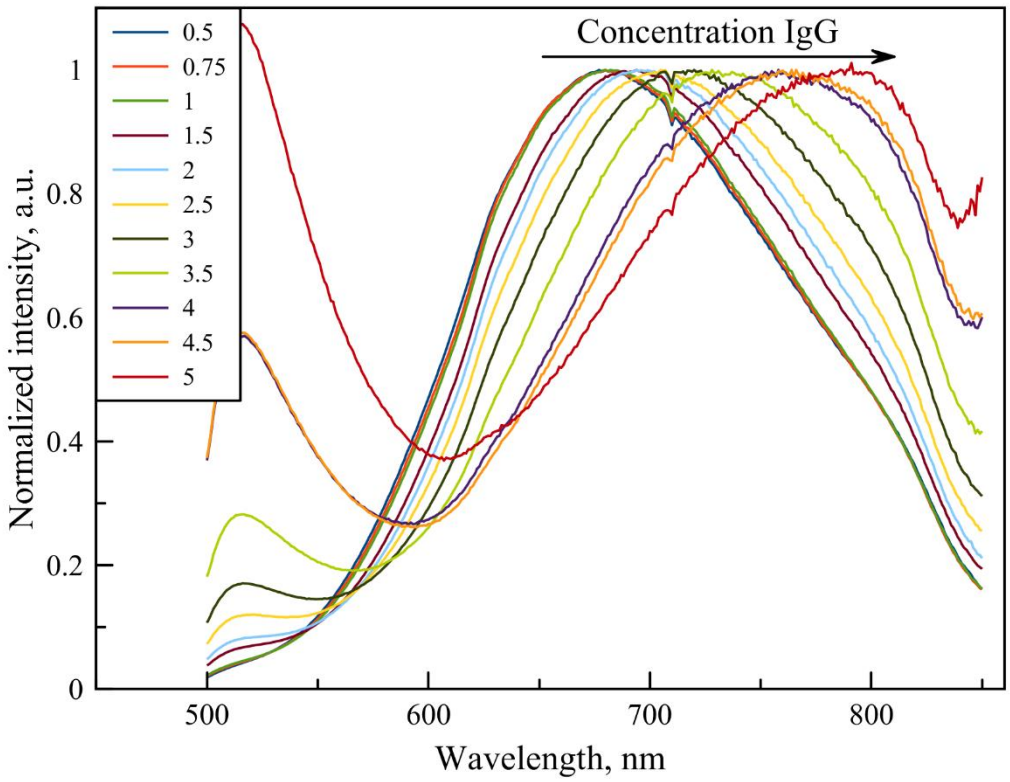

Figure S12. Normalized emission spectra of HSA/IgG-AgNCs complexes.

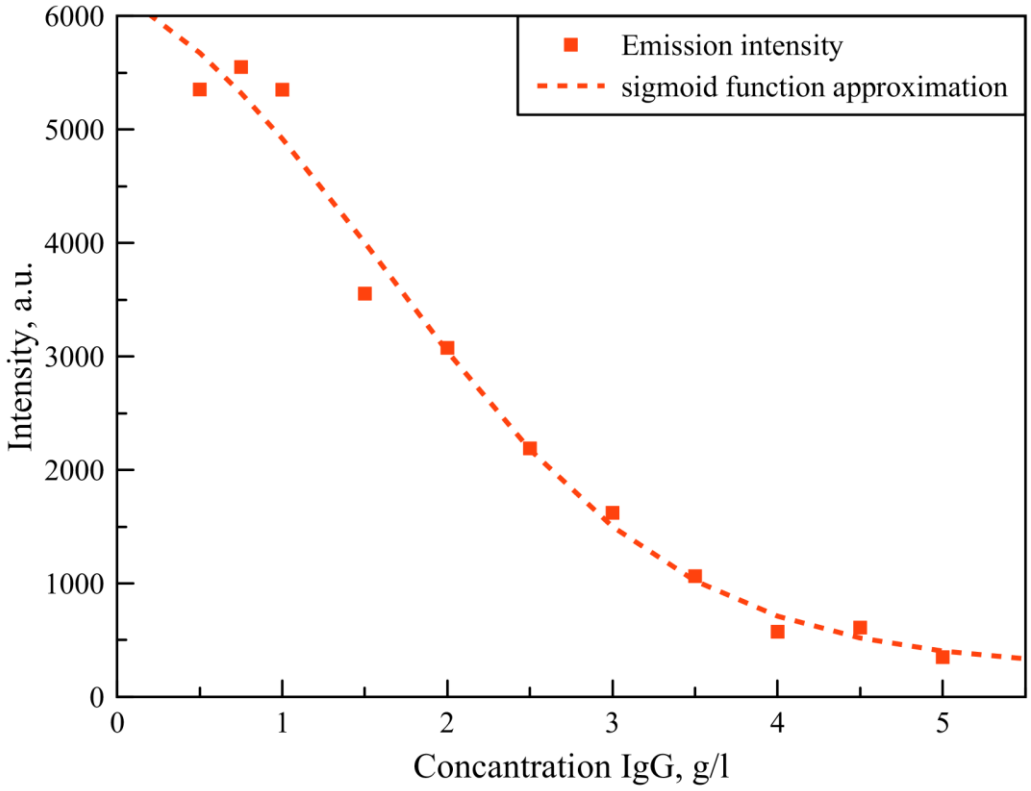

Figure S13. Dependence of emission intensity of HSA/IgG-AgNCs complexes from IgG concentration.

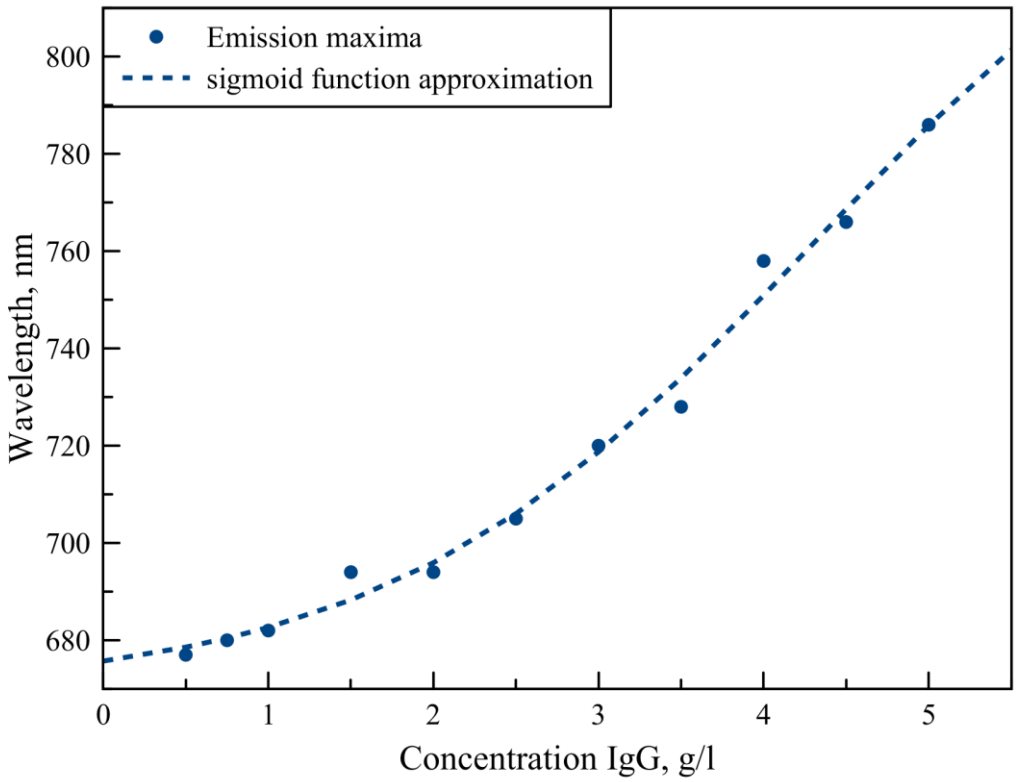

Figure S14. Dependence of emission maximum of HSA/IgG-AgNCs complexes from IgG concentration.

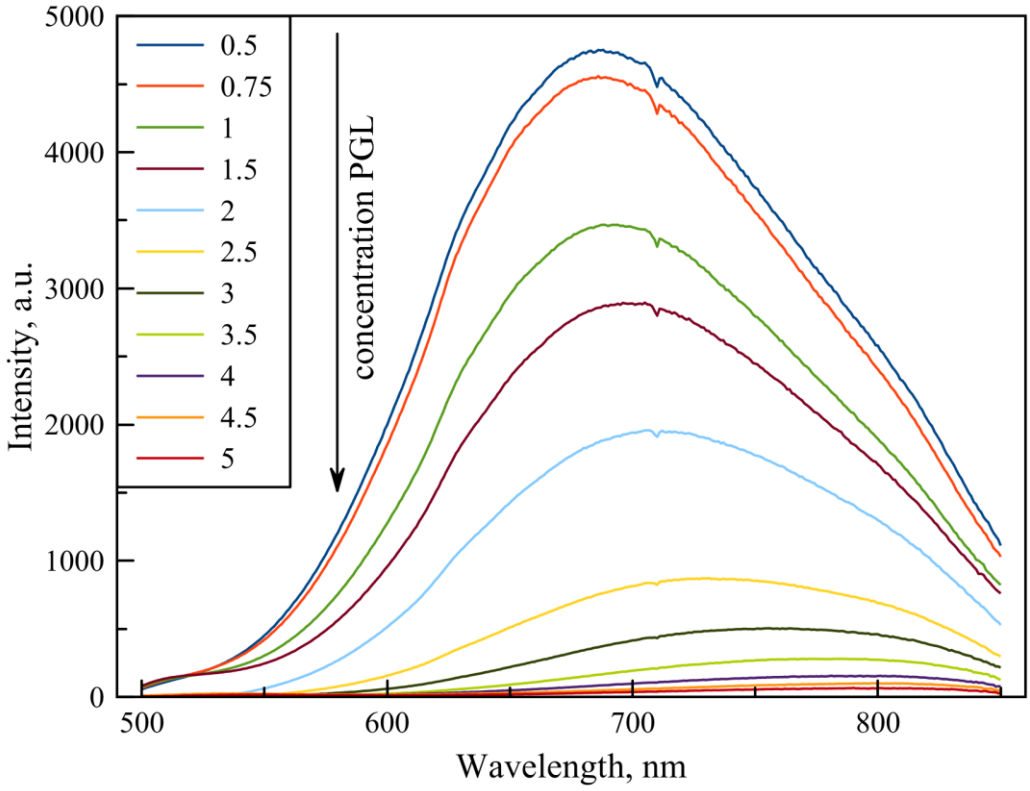

Figure S15. Emission spectra of HSA/PGL-AgNCs complexes.

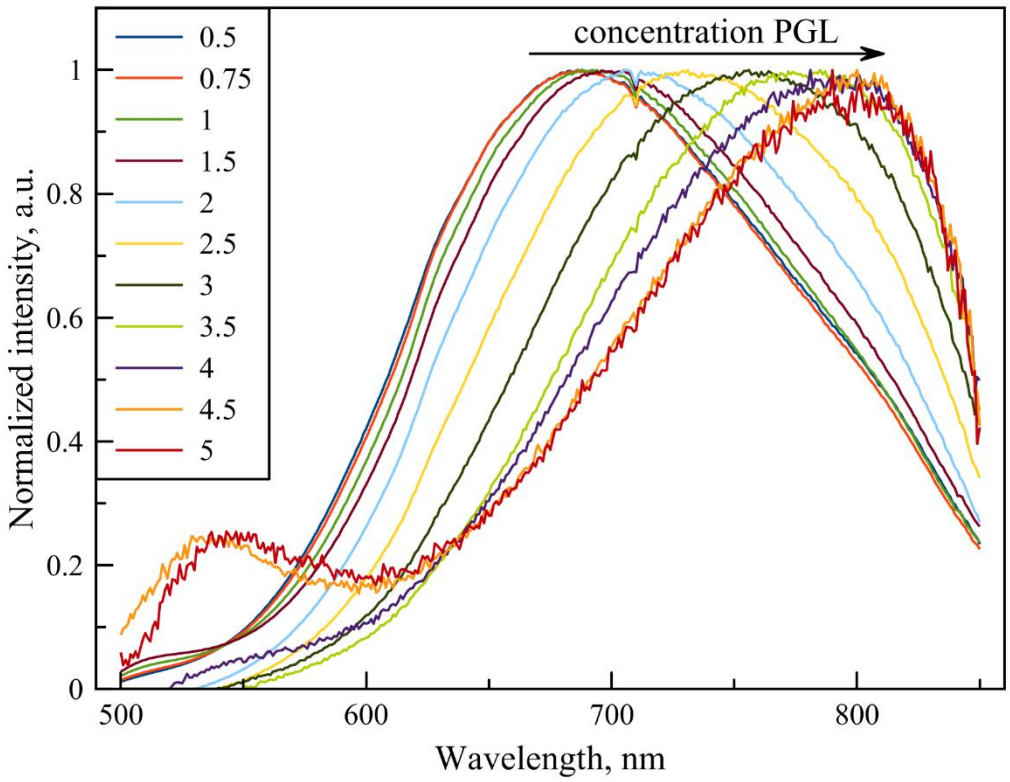

Figure S16. Normalized emission spectra of HSA/PGL-AgNCs complexes.

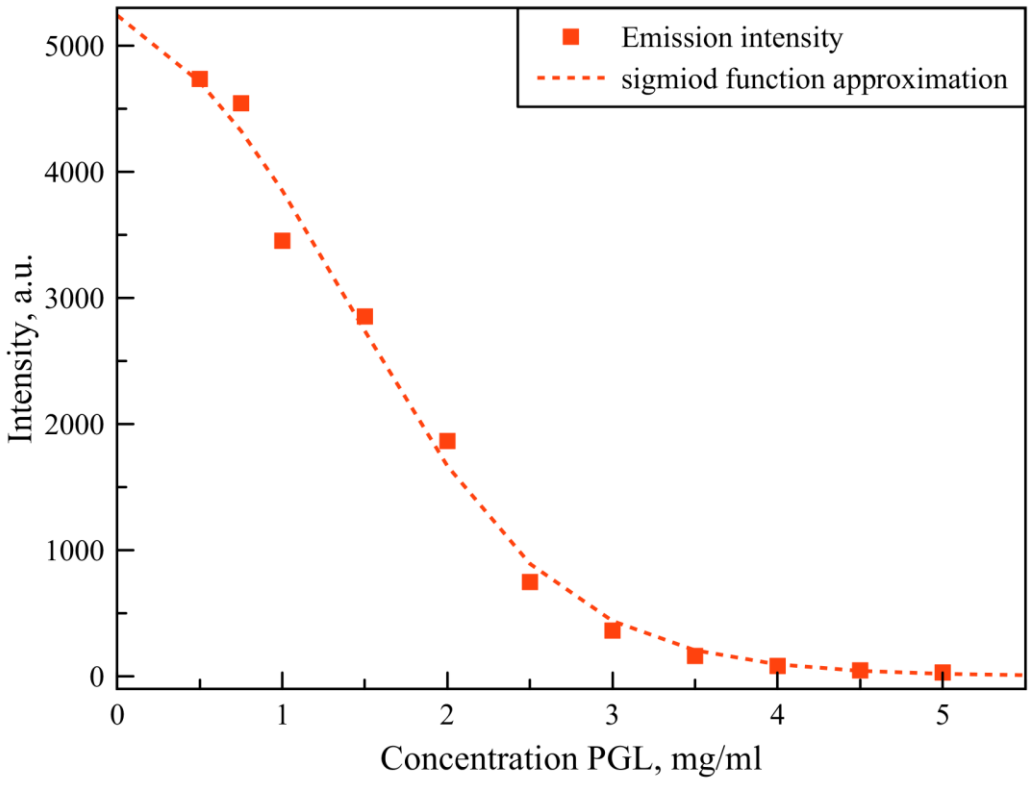

Figure S17. Dependence of emission intensity of HSA/PGL-AgNCs complexes from PGL concentration.

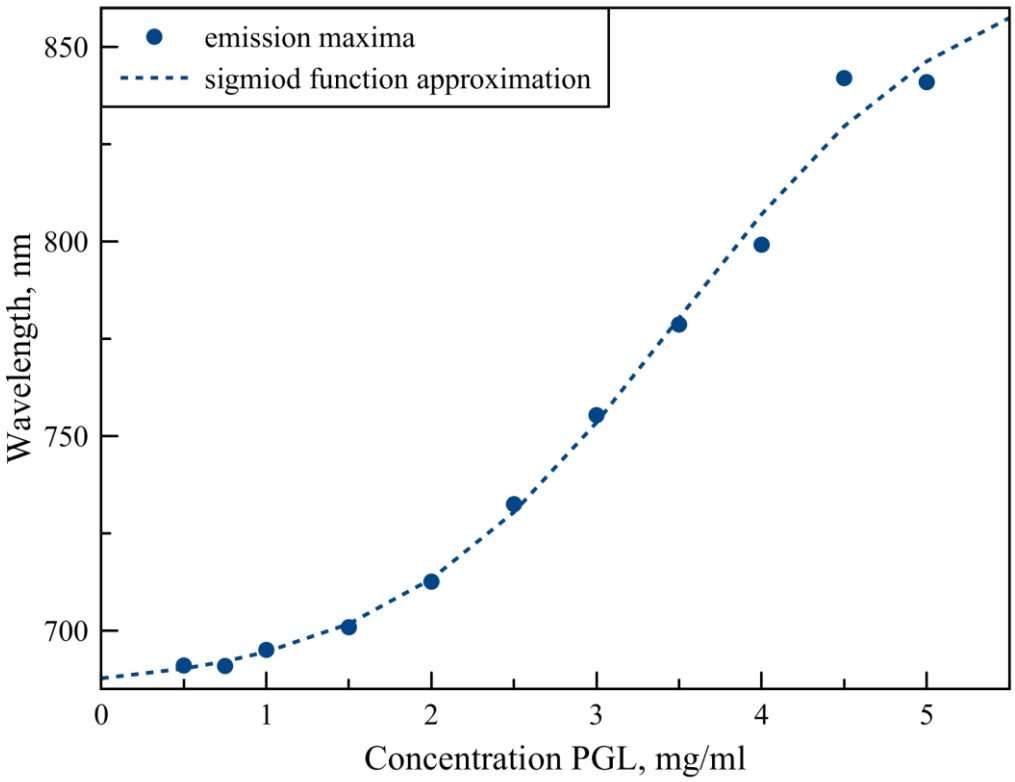

Figure S18. Dependence of emission maximum of HSA/PGL-AgNCs complexes from PGL concentration.