Supporting Information

for

A Zinc-Salophen/Bile-Acid Conjugate Receptor Solubilized by CTABr Micelles Binds Phosphate in Water

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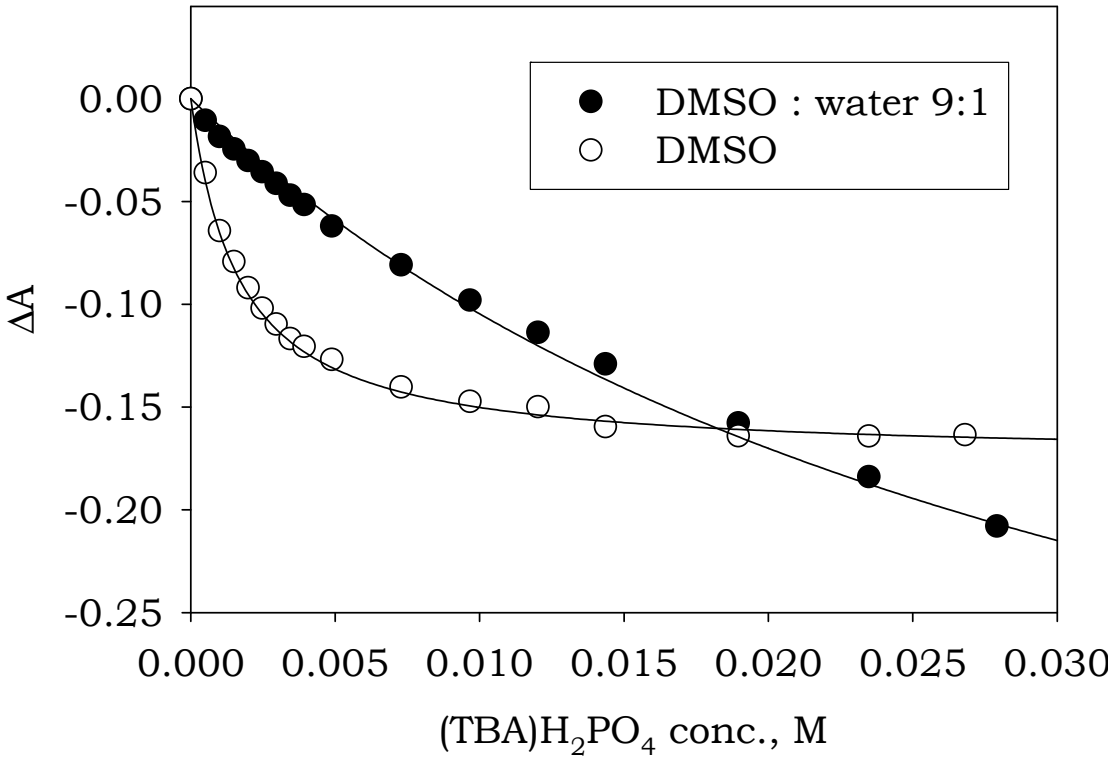

Figure S1. Plots of the absorption variations of **1** upon addition of $(TBA)H_2PO_4$ in DMSO (○) and in a 10%water/DMSO mixture (●), recorded at 300 K. Lines represent the best fit curves (1:1 binding isotherm equation).

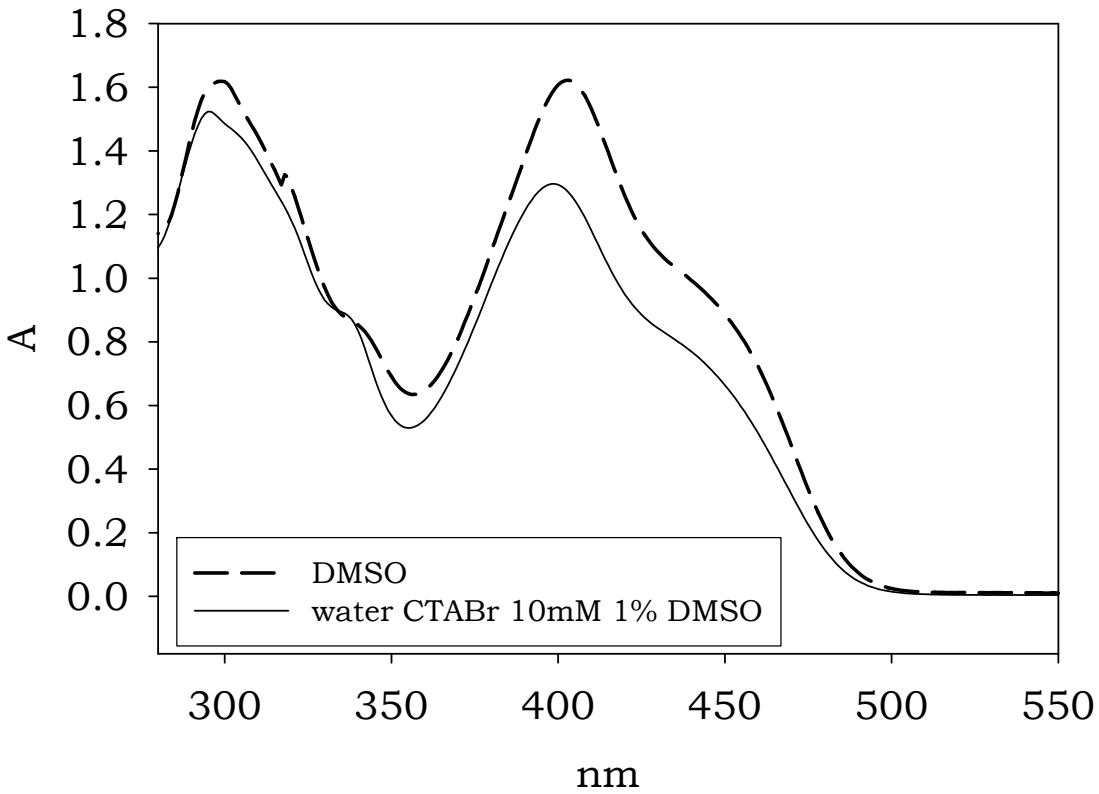

Figure S2. Absorption spectra of a 0.1mM solution of 1 in DMSO (- -) and in water (–) (CTABr, 10mM – 1%DMSO).

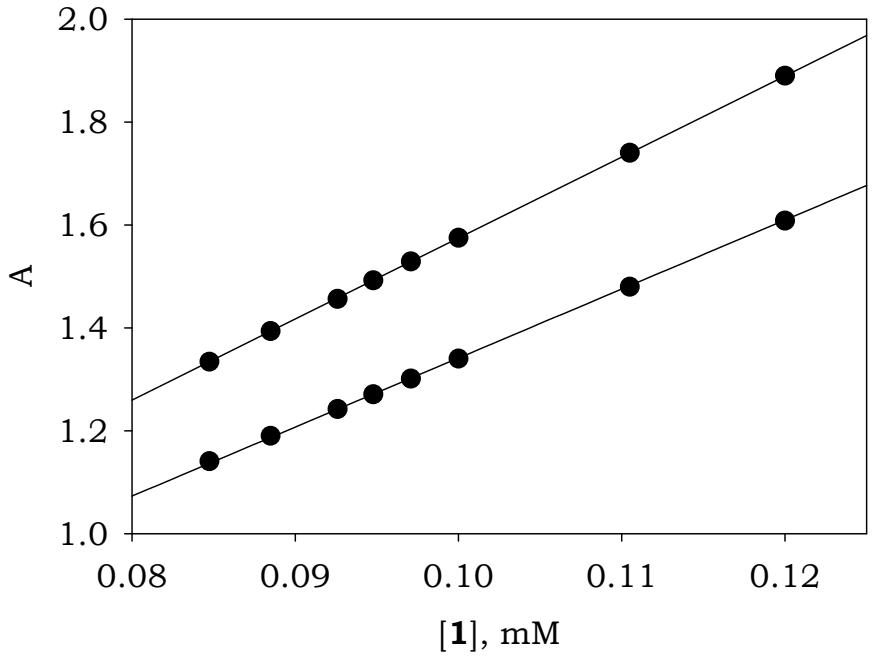

Figure S3. Plot of Absorption vs. [**1**] at 295 and 400 nm, and linear fit of the data (–)

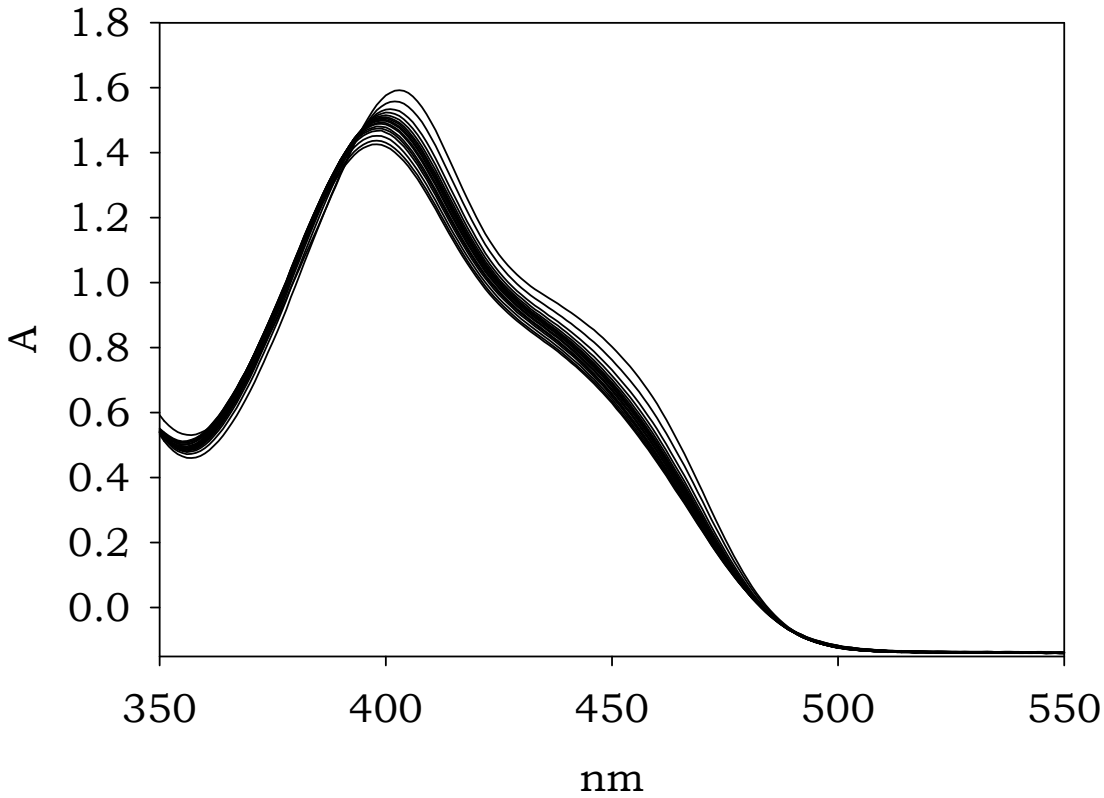

Figure S4. UV-vis variation of a 0.1 mM solution of **1** in DMSO upon addition of $(TBA)H_2PO_4$ at 300 K.

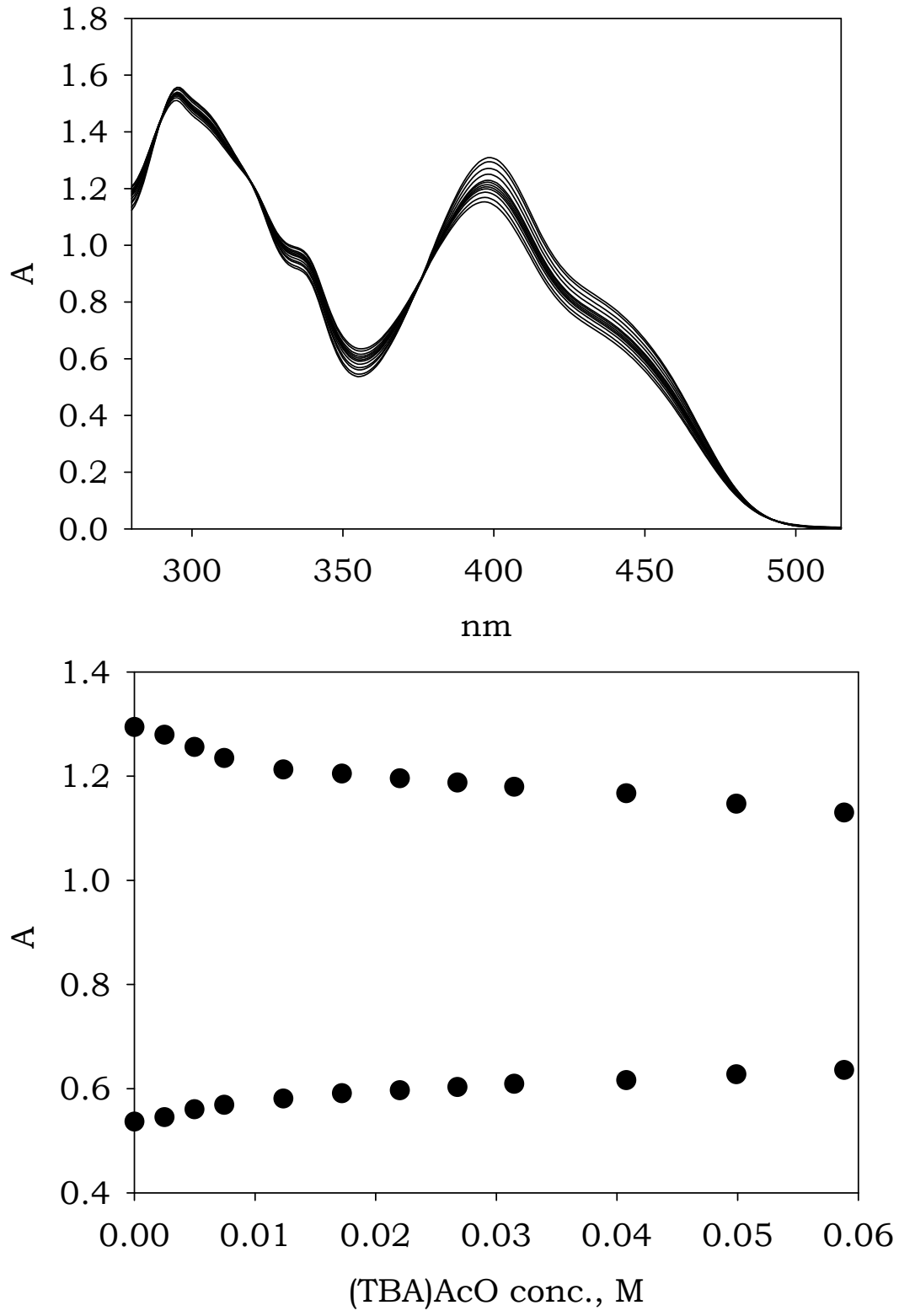

Figure S5. top) UV-vis variation of a 0. 1mM solution of **1** in water (CTABr 10mM, 1% DMSO) upon addition of (TBA)AcO at 300 K; bottom) Plot of the Abs v. AcO conc. at 355 and 400 nm.

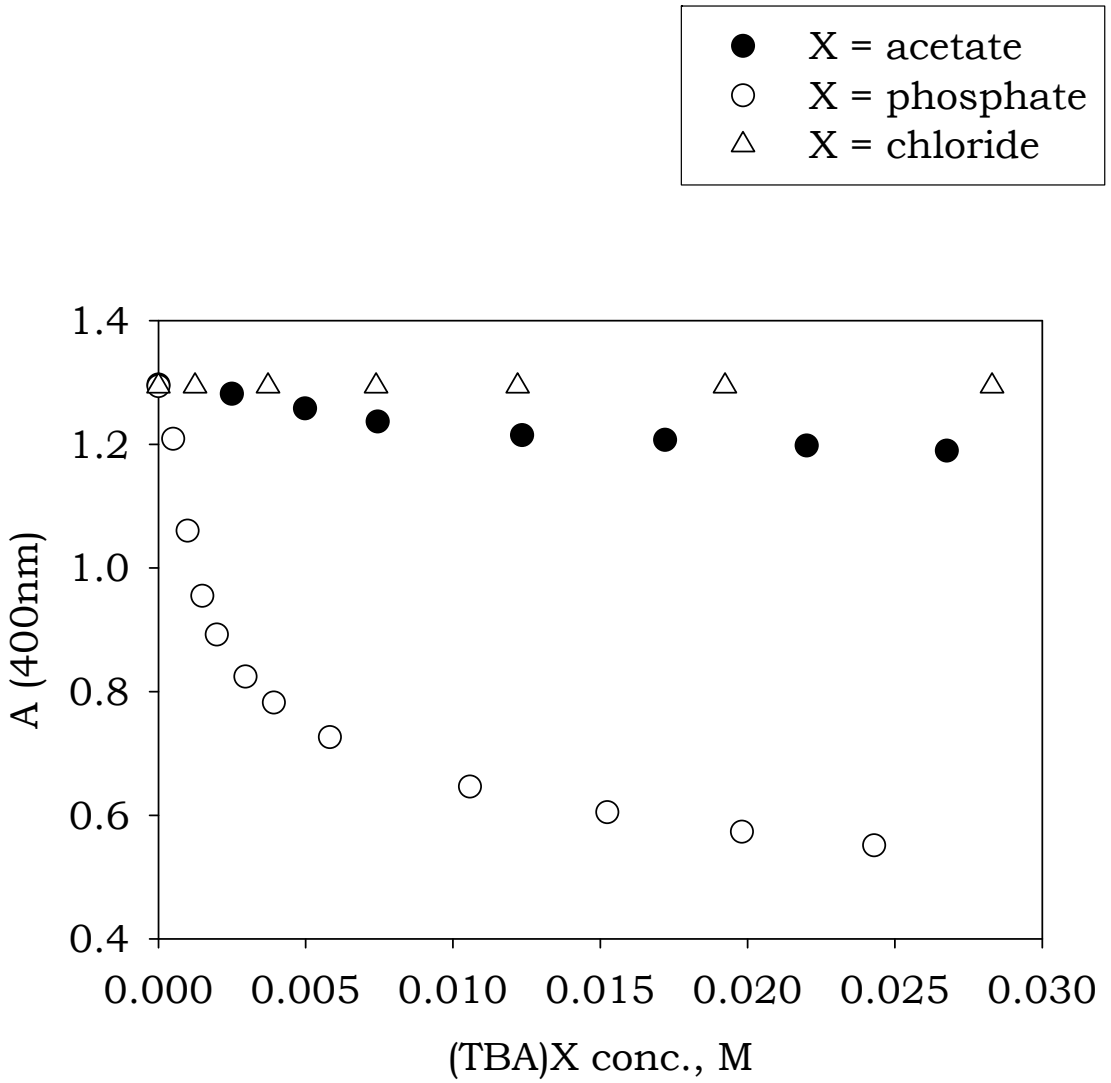

Figure S6. Absorption variation observed upon addition of (TBA)X (X= chloride (Δ), acetate (●) and phosphate (○)) to a 0.1 mM solution of **1** in water (CTABr 10mM, 1%DMSO).

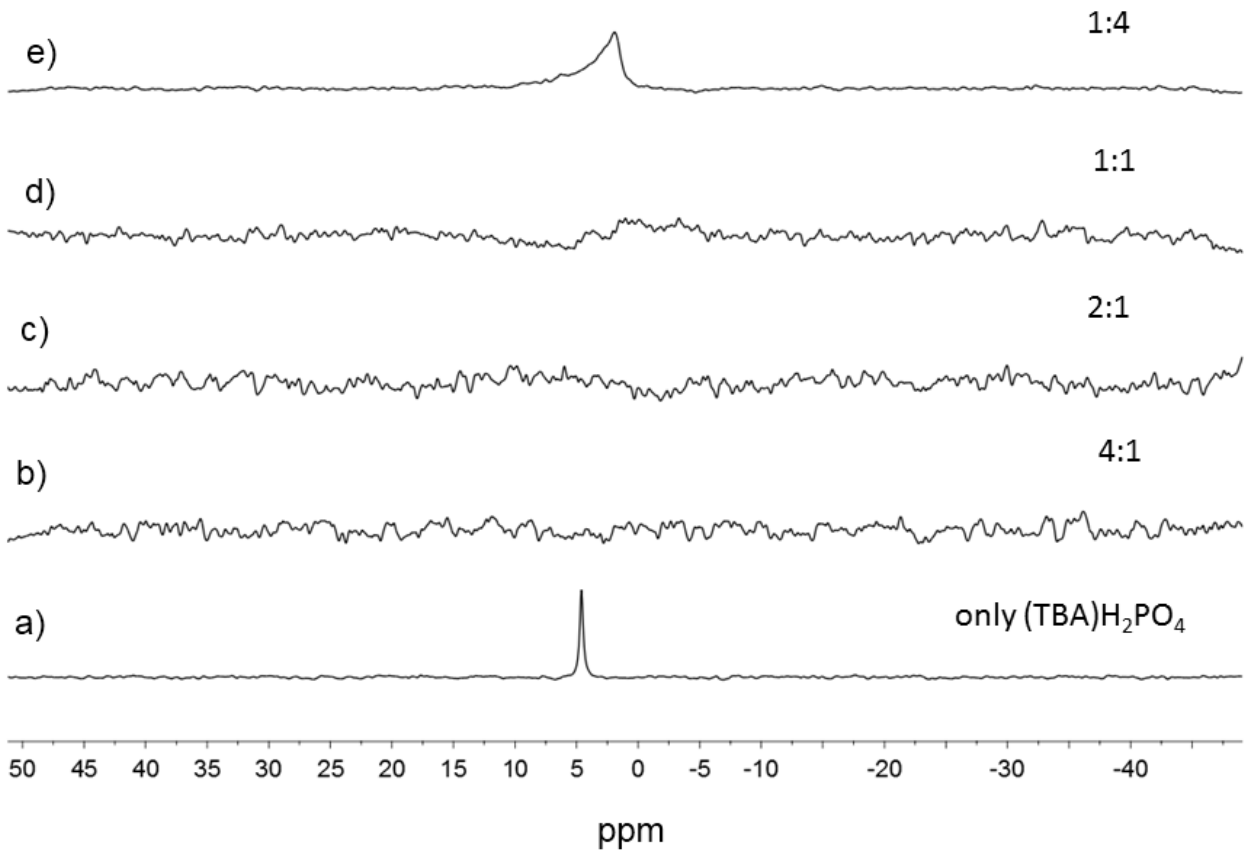

Figure S7. ^{31}P-NMR in DMSO; a) (TBA)H_2PO_4 5mM, b) **1** : (TBA)H_2PO_4 4:1 (20mM : 5mM); c) **1** : (TBA)H_2PO_4 2:1 (20mM : 10mM); d) **1** : (TBA)H_2PO_4 1:1 (20mM : 20mM) and e) **1** : (TBA)H_2PO_4 1:4 (20mM : 80mM).

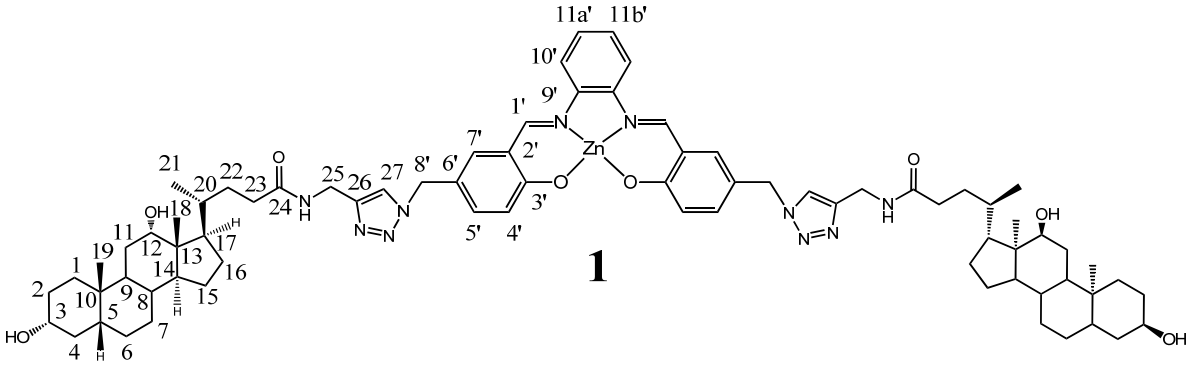

Figure S8. Numbering of **1**, including numbering of **4**; the assignment of individual ^{1}H and ^{13}C signals was carried out by comparing them with NMR data of parental compounds published in the literature,[1] by heteronuclear 2D experiments PFG ^{1}H, ^{13}C HMQC, and supported by data predicted by software ACD/ChemSketch C+H NMR Predictors and DB (Product version 10.04). ^{1}H chemical shifts were referenced to the trace signal of $CHCl_3$ (7.26 ppm from int. TMS) or DMSO (2.5 ppm) and ^{13}C chemical shifts to the center peak of the solvent signal (77.00 ppm from int. TMS for $CDCl_3$, and 39.52 ppm for DMSO-*d6*).

[1] S. Ikonen, H. Macíčková-Cahová, R. Pohl, M. Šanda, and M. Hocek, *Org. Biomol. Chem.*, 2010, **8**, 1194-1201; A. Valkonen, M. Lahtinen, Virtanen E., S. Kaikkonen and E. Kolehmainen, *Biosens. Bioelectron.* 2004, **20**, 1233-1241.