

Electronic Supplementary Information

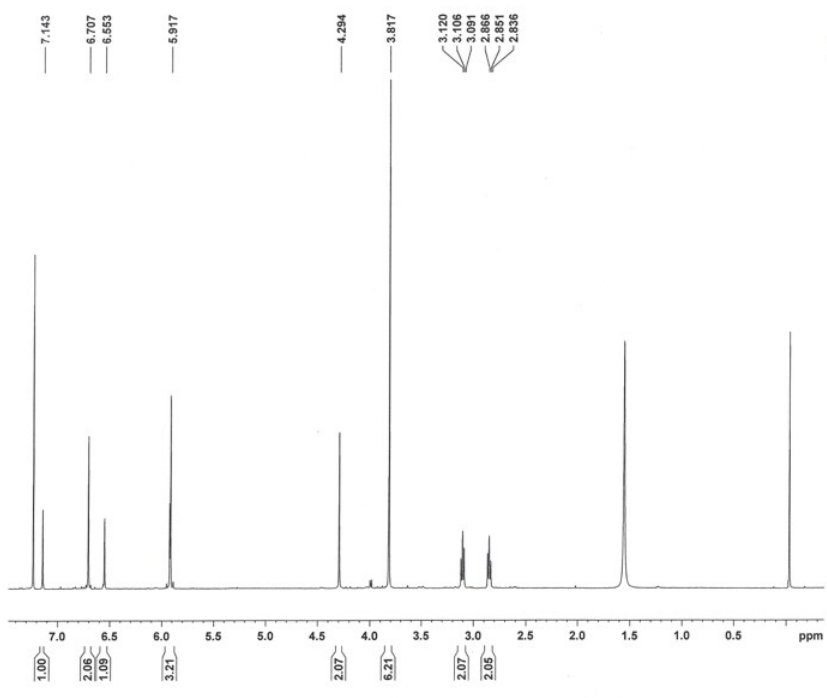
Visualizing Semipermeability of Cell Membrane by a pH-responsive Ratiometric AIEgen

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Current Data Parameters
NAME DHB
EXPNO 2
PROCNO 1

F2 - Acquisition Parameters
Date_ 20181010
Time 20.53
INSTRUM spect
PROBHD 5 mm PABBO 1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9946387 sec
RG 724
DW 60.800 usec
DE 6.00 usec
TE 294.0 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
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P1 15.80 usec
PL1 -1.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
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SF 400.1300198 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

Fig. S1 ¹H NMR spectrum of dhBBR in CDCl₃.

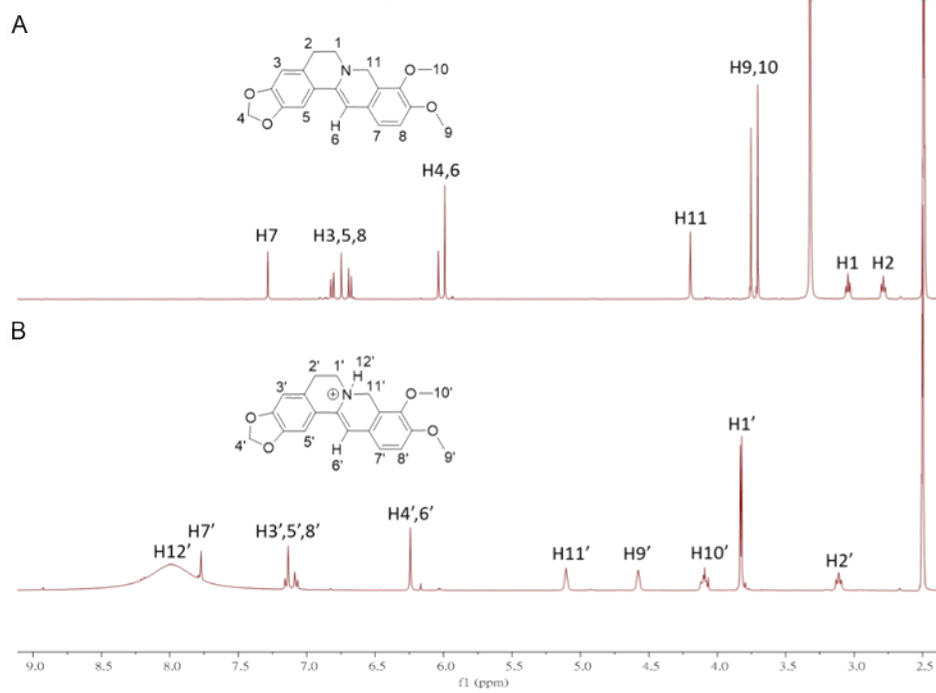


Fig. S2 ^1H NMR spectra of dhBBR before (A) and after (B) the addition of trifluoroacetic acid in DMSO-d_6 solution.

gy-berhydro, MW=337; NH3
tan170612_1 107 (1.784) Cm (102:109-2:31)

TOF MS Cl+
2.26e3

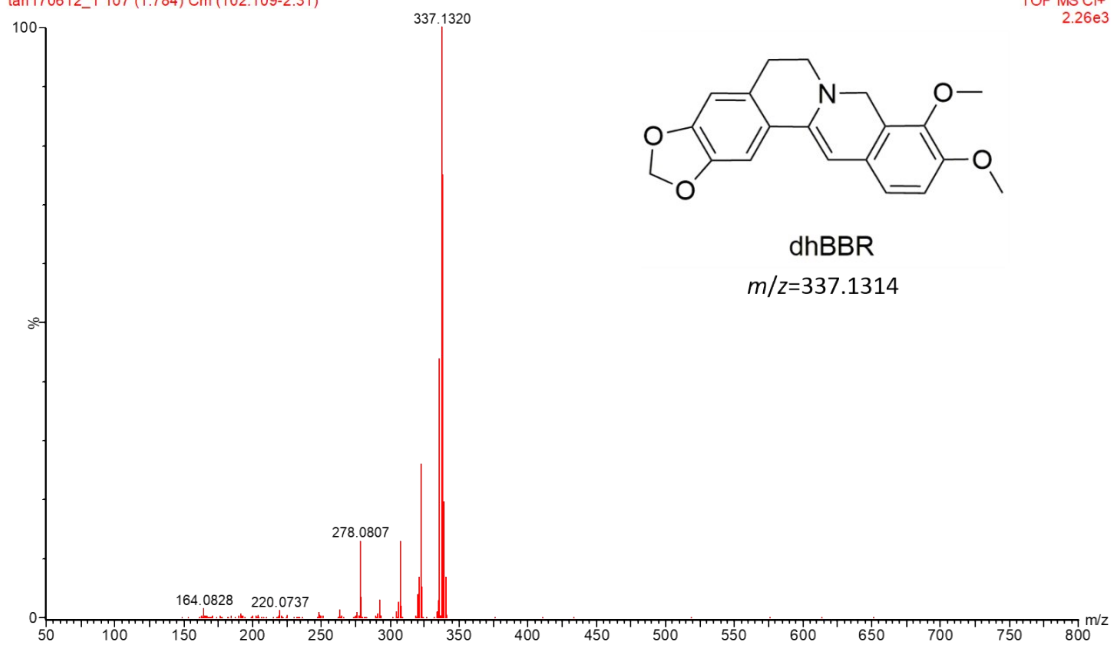


Fig. S3 HRMS spectrum of dhBBR.

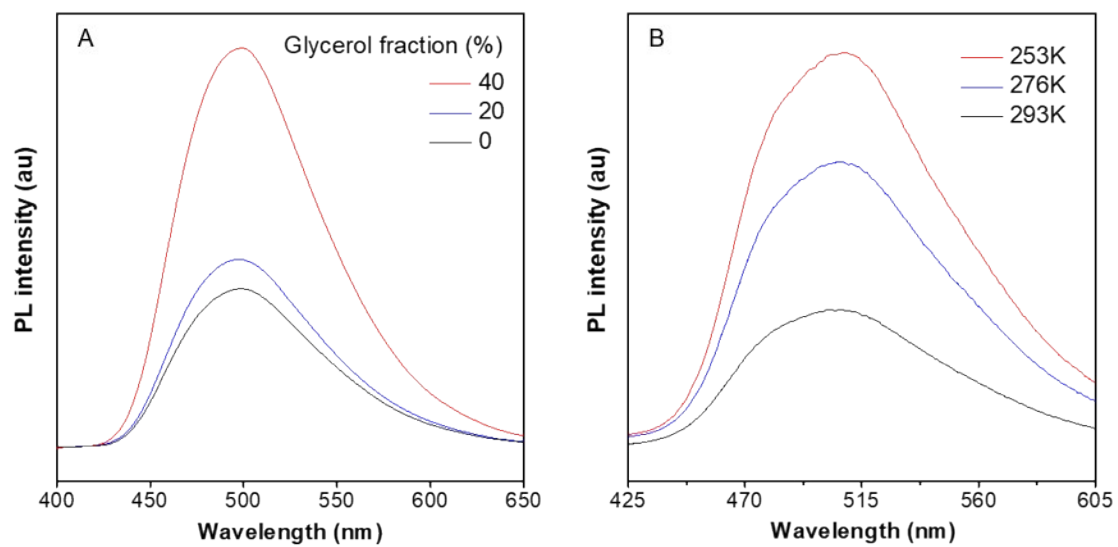


Fig. S4 (A) PL spectra of dhBBR in ethylene glycol/glycerol mixtures with different fractions of glycerol. (B) Temperature dependence of the PL spectra of dhBBR in DMSO solution. Solution concentration: 10 μ M; Excitation wavelength: 365 nm.

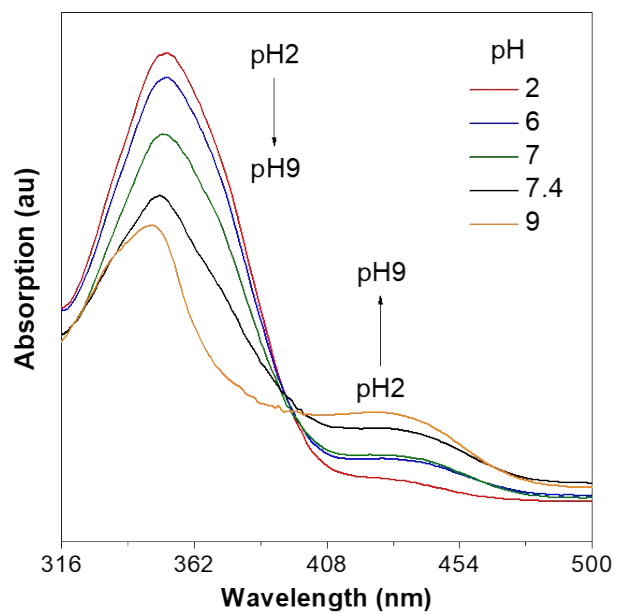


Fig. S5 UV-Vis spectra of dhBBR in the PBS buffer solutions with different pH values. [dhBBR] = 10 μ M.

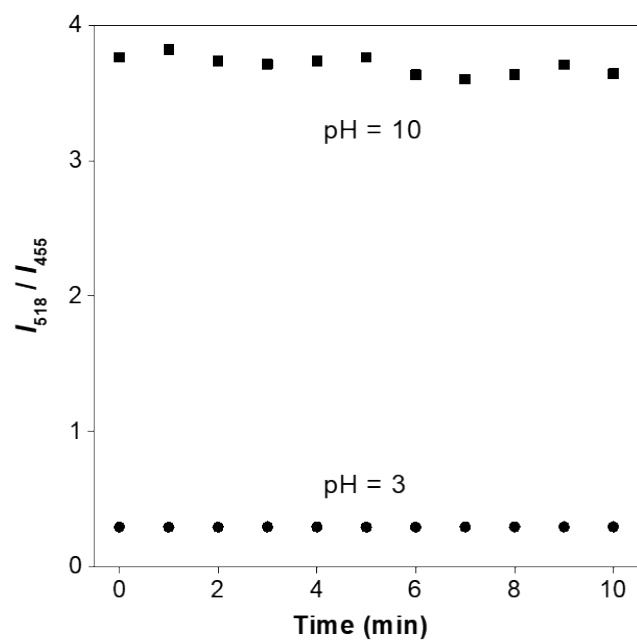


Fig. S6 Time course of the fluorescence intensity ratios (I_{518}/I_{455}) of dhBBR (10 μ M) in PBS buffer at pH 3 and pH 10.

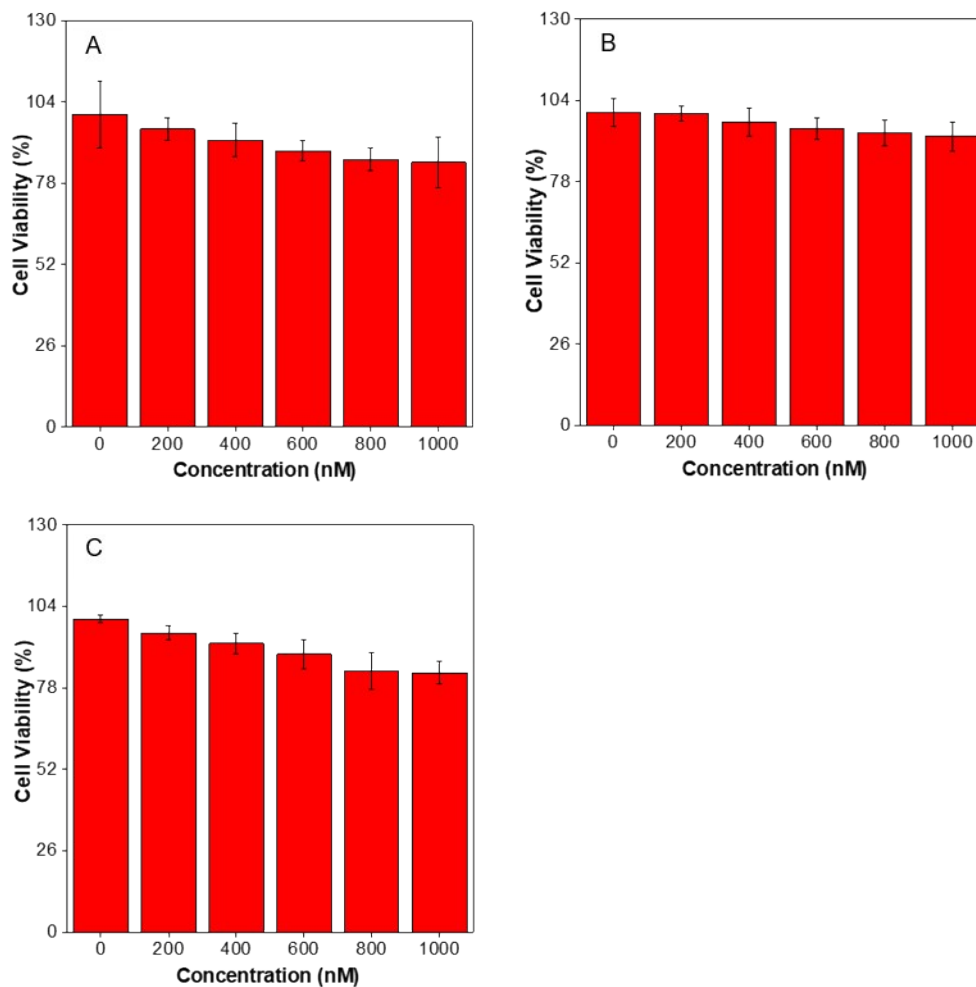


Fig. S7 Viability of A549 cells (A), HEK 293T cells (B) and HeLa cells in the presence of different concentrations of dhBBR for 24 h. Data are expressed as mean value of six separate trials.

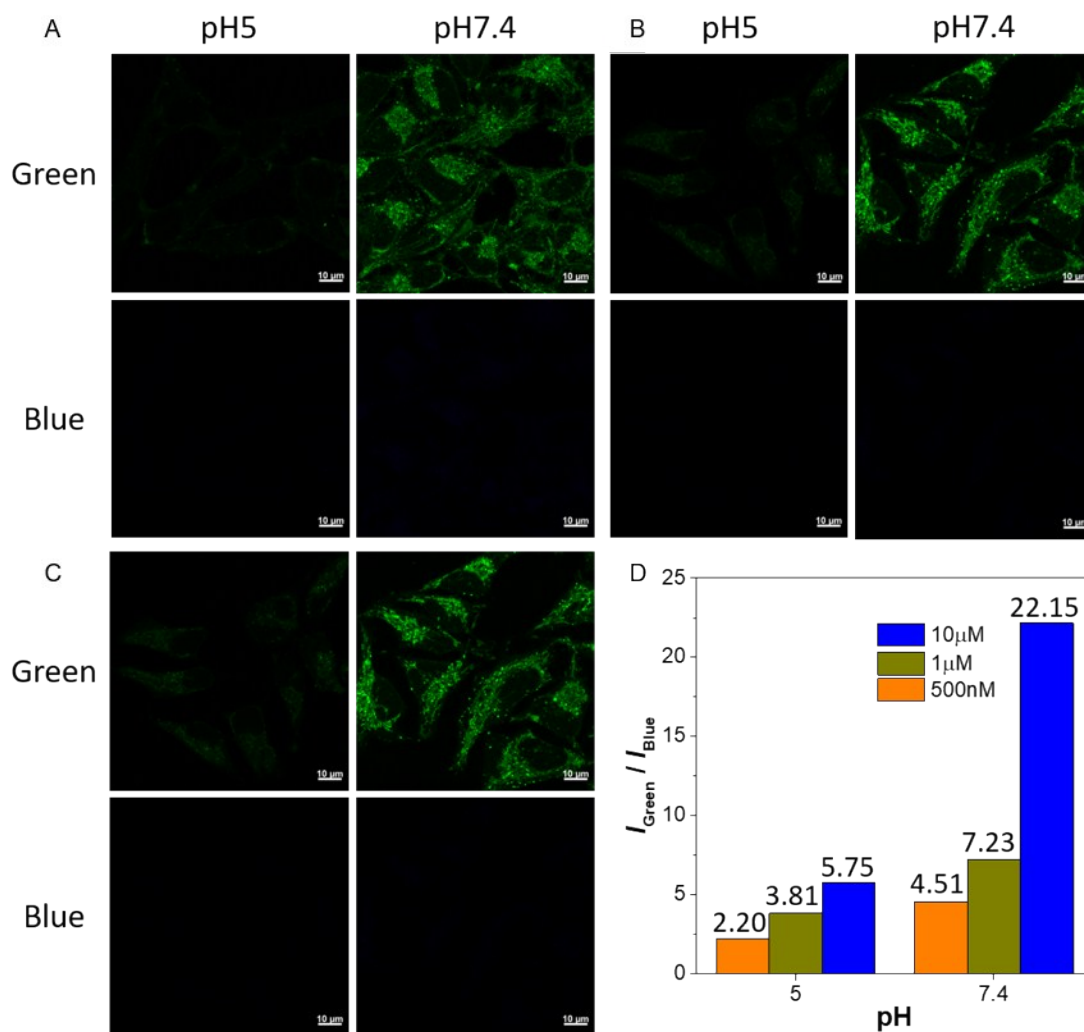


Fig. S8 CLSM images of HeLa cells stained with varied concentrations of dhBBR in different pH PBS buffers for 30 min. dhBBR Concentrations: (A) 500 nM. (B) 1 μM. (C) 10 μM. (D) Relative PL intensity of varied concentrations of dhBBR treated HeLa cells in different pH PBS buffers. Scale bar = 10 μm.