Electronic Supplementary Information for

Fluorogenic sensor for in-situ tracking of viscosity of cellular inflammatory stress

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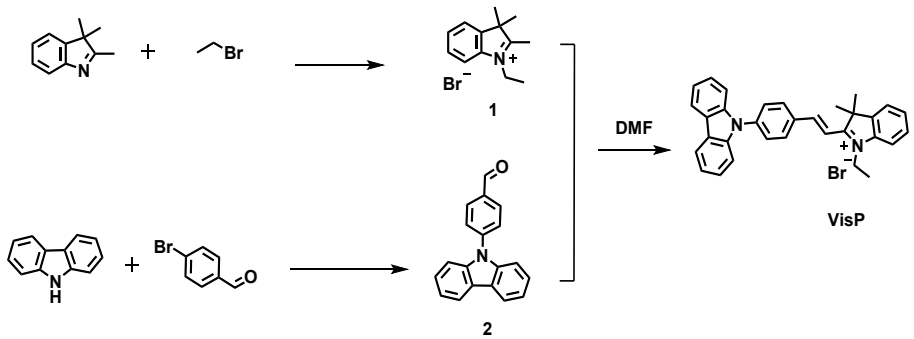
Materials and instruments

UV-vis absorption spectra were obtained on a Shimadzu UV-2700 spectrophotometer and fluorescence spectra were measured on a HITACHI F4600 fluorescence spectrophotometer with a 1 cm standard quartz cell. MTT was purchased from J&K Scientific Ltd. Fluorescence imaging experiments were performed with Nikon A1MP confocal microscopy. TLC analysis carried out on silica gel plates and column chromatography was conducted over silica gel (mesh 200−300), both of them were purchased from the Qingdao Ocean Chemicals. ^{1}H and ^{13}C NMR spectra were measured on an AVANCE III digital NMR spectrometer, using tetramethylsilane (TMS) as internal reference. High resolution mass spectrometric (HRMS) analyses were measured on an Agilent 1100 HPLC/MSD spectrometer. Cell imaging experiment was performed on Nikon A1 fluorescence Microscopy equipped with a cooled CCD camera.

Probe synthesis route



Scheme S1. The synthesis route of the probe **VisP**.

Cytotoxicity Assays

The cytotoxicity of the probe **VisP** to Hela cells was studied by standard MTT test. 2×10^4 cells/mL cells were seeded in 96-well plates and then incubated with various concentrations of **VisP** (0-50 μM) for 24 h. After that, 10 μL MTT (5 mg/mL) was

added to each well and incubated for another 4 h. Finally, the media was discharged, and 100 μL of DMSO was loaded to dissolve the formazan crystals. The plate was shaken for about 10 min, and each well was analyzed by the microplate reader and detected at the absorbance of 490 nm.

$$\text{The cell viability (\%)} = (OD_s - OD_b) / (OD_c - OD_b) \times 100\%$$

As it shown in the formula above, s, b and c represent the sample group, the blank group and the control group respectively.

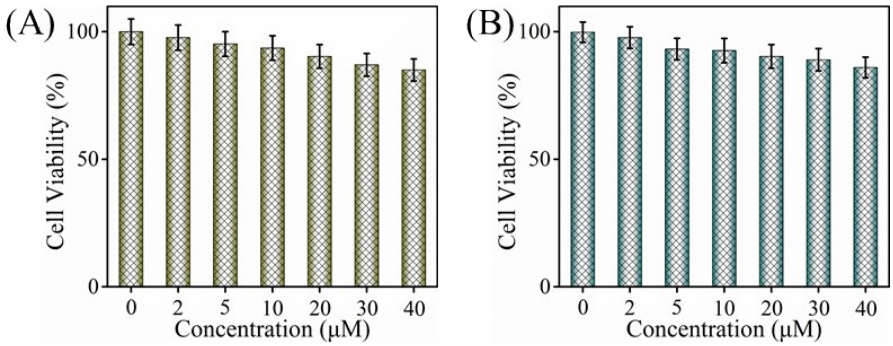


Fig.S1 The MTT test of probe in (A) HepG2 and (B) HL-7702 cells.

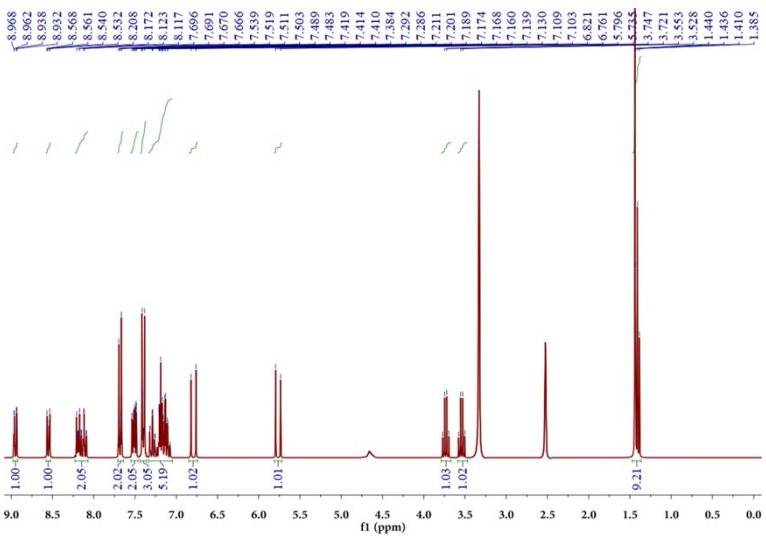


Fig. S2 The ^{1}H NMR spectrum of **VisP** in DMSO-*d6*.

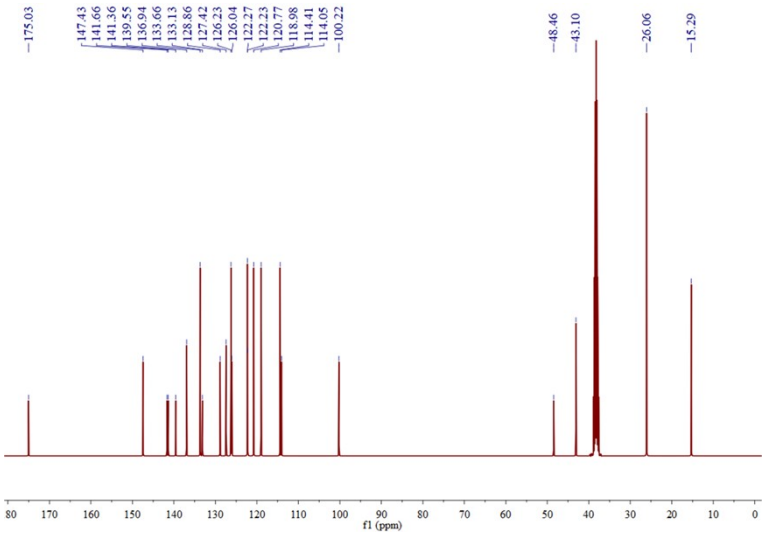


Fig. S3 The ^{13}C NMR spectrum of **VisP** in DMSO-*d6*.