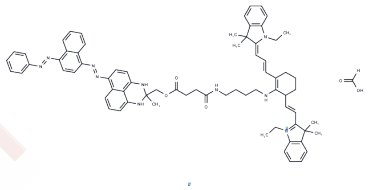
Data Sheet (Cat.No.T77767L)

TargetMol

GLF16 FA

Chemical Properties



CAS No. :

Formula: C73H81IN10O5

Molecular Weight: 1305.42

Storage: Keep away from direct sunlight,Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	GLF16 FA is a fluorescent SBB analogue for rapid detection of senescent cells using flow cytometry and live cell sorting.
Targets(IC50)	Others
Cell Research	Instructions I. Solution preparation 1. Stock solution: Dissolve GLF16 FA in an appropriate solvent, usually anhydrous DMSO, to prepare a stock solution with a concentration of 1-10 mM. 2. Working solution: Dilute the stock solution to a working concentration, usually 1-5 μM, using an experimental buffer (such as PBS, pH 7.4) or culture medium. II. Operation steps Cell culture experiment (1) Cell type: GLF16 FA can be used to detect senescent cells, especially for a variety of cell lines cultured in vitro. (2) Treatment method: Add GLF16 FA to the cell culture medium and culture the cells for 30 minutes to 1 hour at 37°C, away from light. (3) Cell function detection: a. Senescence marker detection: Detect the fluorescence intensity of GLF16 FA in cells by flow cytometry or live cell sorting to identify senescent cells. b. Cell survival rate detection: CCK-8 or other cell activity detection methods can be used to evaluate cell survival rate. c. Senescence marker detection: Combined with other senescence markers, such as SA-β-gal, the characteristics of senescent cells can be further verified. Animal experiments (1) Treatment method: GLF16 FA is administered to experimental animals by intraperitoneal injection or tail vein injection. The dose is usually 1-10 mg/kg depending on the experimental design. (2) Senescence detection: After injection, the fluorescence signal of senescent cells in vivo is detected by flow cytometry or other imaging techniques. 3. Calibration and control (1) Control group: Set up an untreated cell or animal group as a control to verify the effect of GLF16 FA.

Cell Research	(2) Standard curve: Use senescent cell samples with known concentrations to establish a standard curve between the fluorescence signal and the proportion of senescent cells. Notes (1) Storage conditions: GLF16 FA should be stored at -20°C in the dark and avoid repeated freezing and thawing. (2) Fluorescence detection: The excitation wavelength is usually 485-495 nm and the emission wavelength is 515-525 nm. (3) Photosensitivity: GLF16 FA is light-sensitive and strong light exposure should be avoided during the experiment. (4) Solubility: Ensure that GLF16 FA is completely dissolved during dissolution to avoid any solid residue. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble) DMSO: 100 mg/mL (76.6 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.766 mL	3.8302 mL	7.6604 mL
5 mM	0.1532 mL	0.766 mL	1.5321 mL
10 mM	0.0766 mL	0.383 mL	0.766 mL
50 mM	0.0153 mL	0.0766 mL	0.1532 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Magkouta S, et al. One-step rapid tracking and isolation of senescent cells in cellular systems, tissues, or animal models via GLF16. STAR Protoc. 2024 Mar 15;5(1):102929.
Begum J,et al. A method for evaluating the use of fluorescent dyes to track proliferation in cell lines by dye dilution. Cytometry A. 2013 Dec;83(12):1085-95.