

Product Data Sheet

Product Name: LDS-751

Cat. No.: GC30134

Chemical Properties

Cas. No. 181885-68-7

SMILES CC[N+]1=C2C=CC(N(C)C)=CC2=CC=C1/C=C/C=C/C3=CC=C(N(C)C)C=C3.O=Cl(=O)([O-])=O

Formula $C_{25}H_{30}ClN_3O_4$ M.Wt 471.98

Solubility	DMSO : 83.33 mg/mL (176.55 mM; ultrasonic and warming and heat to 60°C)	Storage	Store at -20°C, stored under argon, unstable in solution, ready to use.
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General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

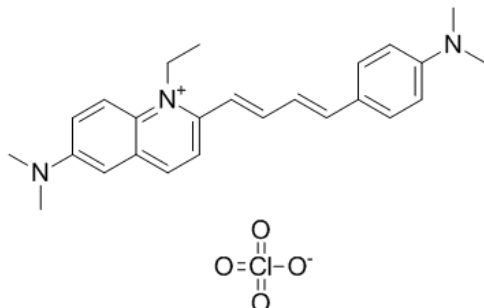
Caution: Product has not been fully validated for medical applications. For research use only.

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Structure



Protocol

This protocol is only a guide. Please modify it according to your specific needs.

1. Prepare LDS 751 staining solution

(1) Prepare LDS 751 dye stock solution: Use 5.297mL DMSO to fully dissolve 25mg LDS 751 to obtain 10mM stock solution.

Note: It is recommended to store LDS 751 stock solution at -20°C in the dark after aliquoting to avoid repeated freezing and thawing.

(2) Prepare LDS 751 working solution: Use preheated serum-free culture medium or buffer (such as HBSS or PBS) to dilute the stock solution and prepare LDS 751 working solution with a concentration of 10µM.

Note: Please adjust the concentration of LDS 751 working solution according to actual conditions and prepare it before use.

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2. Cell staining

2.1 Suspended cells (taking 6-well plate as an example)

(1) Suspended cells are centrifuged at 1000g for 3-5min. Discard the supernatant and wash twice with PBS for 5 minutes each.

(2) Add 1 mL of LDS 751 working solution and incubate at room temperature in the dark for 15-60 min.

(3) After incubation, centrifuge at 1000g for 5 minutes, remove the supernatant, and wash 2-3 times with PBS, 5 minutes each time.

(4) Resuspend the cells in serum-free cell culture medium or PBS, and observe by fluorescence enzyme labeling plate or flow cytometry.

2.2 Adherent cells

(1) Culture adherent cells on sterile coverslips.

(2) Remove the coverslip from the culture medium, aspirate the excess culture medium, and place the coverslip in a humid environment.

(3) Add 100uL of LDS 751 working solution from one corner of the coverslip, gently shake to evenly cover all cells with the dye, and incubate at room temperature in the dark for 15-60 min.

(4) Aspirate the dye working solution, wash the coverslip 2-3 times with culture medium, and observe by fluorescence enzyme labeling plate or flow cytometry.

3. Fluorescence ELISA plate detection: The excitation/emission light of LDS 751 is 543/712nm respectively (binding to DNA)

Notes:

(1) For staining of fixed cells or tissue samples, rinse to remove the fixative after fixation;

(2) To slow down fluorescence quenching, it is recommended to use anti-fluorescence quenching sealing agent;

(3) LDS 751 is irritating to the human body. For your safety and health, please wear a lab coat and disposable gloves when operating.

(4) Be sure to try several staining concentrations for the first experiment to determine the optimal working concentration. Higher concentrations may cause nonspecific staining of cell structures.

Background

LDS 751 is a cell membrane permeable nucleic acid stain used to distinguish intact nucleated cells from anucleated and damaged nucleated cells, and to distinguish different cell types in mixed neutrophils, lymphocytes and monocytes by flow cytometry. The excitation/emission light of LDS 751 is 543/712nm respectively (when bound to DNA). The maximum excitation wavelength of LDS 751

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binding to dsDNA is ~543nm, which can be excited by a 488nm argon ion laser. It is particularly suitable for multicolor analysis due to its longer maximum emission wavelength (~712 nm). Binding to dsDNA causes a fluorescence enhancement of ~20 times. Thiazole orange (mainly binds RNA, GC30038) and LDS751 (mainly binds DNA) are used to distinguish red blood cells, platelets, reticulocytes and nucleated cells.

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