

Lipophilic Fluorescent Probes Solubility Enhancer (200×)

Introduction

The lipophilic fluorescent probes DiO, Dil, and DiD, which are commonly used for cell membrane labeling, have low solubility in water and are prone to precipitation during staining, resulting in poor staining results.

Lipophilic Fluorescent Probes Solubility Enhancer is a polymer nonionic surfactant that can increase the water solubility and cell permeability of these fluorescent probes. This product is provided as a 200× stock solution dissolved in DMSO.

Components and Storage

Components	Size	3 mL	15 mL	Storage
Lipophilic Fluorescent Probes Solubility Enhancer (200×)		2×1.5 mL	10×1.5 mL	4°C
Shipping: Blue ice		Shelf life: 2 years		

Protocol

1. Preparation of working solution (DiO as an example)

- DiO (200×) preparation: Dissolve DiO in anhydrous DMF, DMSO, or absolute ethanol to prepare a 2 mM stock solution. The commonly used concentration of the working solution is 5-10 μM . If 10 μM is used as the working concentration, the stock solution is 200×.
- For 96-well plates, refer to the following table to prepare the working solution in order. The Staining Buffer can be cell culture medium, PBS, HBSS, or other suitable buffers.

Number of samples	10	100	1000
DiO (200×)	5 μL	50 μL	500 μL
Solubility Enhancer (200×)	5 μL	50 μL	500 μL
Staining Buffer	990 μL	9.90 mL	99 mL
Total	1 mL	10 mL	100 mL

*Note:

- The working solution is unstable, so it is better to dilute the stock solution when using it.
- DiO solution concentrations can be optimized depending on specific experiments. Keep the same dosage of Solubility Enhancer (200×).

2. Cell staining

Refer to the protocol of DiO staining kit (K2300) for staining.

Note

1. If this product appears to precipitate, heat it in 37-50°C bath to promote dissolution. It will not affect the use.
2. For your safety and health, please wear a lab coat and disposable gloves for operation.
3. This product is for scientific use only and should not be used for clinical diagnosis or treatment.



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