Data Sheet (Cat.No.C0170)

TargetMol

DiR Staining Solution

Chemical Properties

CAS No. :

Formula:

Molecular Weight:

Storage: Keep away from direct sunlight
Store at -20°C
Actual storage temperature shall be subject to the COA.

Biological Description

Description	DiR (1,1 '- Dioctadecyl-3,3', 3 '- tetramethylindolotricarbocyanine iodide) is a lipophilic near-infrared fluorescent dye. The long-chain alkyl group of DiR molecule tightly binds with the hydrophobic core of the lipid bilayer of the cell membrane through van der Waals forces, inserting into the cell membrane. The indole ring is partially exposed on the membrane surface, and the quaternary ammonium salt group interacts with the polar environment on the membrane surface to prevent DiR from detaching from the membrane, thereby stabilizing and anchoring DiR on the cell membrane. The fluorescence intensity of free DiR that is not bound to the membrane is extremely low. After binding to the cell membrane, the fluorescence efficiency of DiR is significantly enhanced, and it emits infrared fluorescence upon excitation (maximum excitation wavelength of about 748 nm, maximum emission wavelength of about 780 nm). DiR has strong near-infrared light, good penetration into cells or tissues, and low self fluorescence level in the near-infrared region, making it suitable for in vivo imaging or tracking experiments.

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