神经元绿色荧光染料 NeuroGreen

说明书修订日期：2015.12.01

Cat number：KGMP003-1

Store at -20℃ for 12 months，避光

For Research Use Only（科研专用）

一、产品描述

NeuroGreen 主要为长链二烷基羰花青化合物 DIO，广泛应用于固定和非固定的组织与细胞中，进行顺行或逆行的神经示踪分析。DiI 不会影响细胞的活力、生长以及基本生理特性。DiO 标记运动神经元，可在培养基条件下持续跟踪长达四周，在体内长达一年。染料通过在质膜中的缓慢横向扩散均匀标记神经元，0.2~0.6mm/每天/固定标本，在活体组织里，可以达到 6mm/每天。经过醛固定的组织，染料扩增可以持续长达 1~2 年。一般情况下未标记的染料不会向非标记的细胞转移，除非质膜被破坏，比如切片部位。

二、产品包装

组　份	Cat: KGMP003-1	储存条件
Neurogreen	10mg	-20℃，避光

三、操作说明

Loading of tracers supplied as oils. The sticky oil residue may be warmed slightly and applied directly to tissue samples with forceps. The tissue should then be warmed to ~40℃ to facilitate transport of the dye.

Loading by injection. Pressure microinjection of a small bolus of concentrated dye solution isan alternative to direct application of crystalline dye for retrograde and anterograde neuronaltracing. A 2.5mg/mL (0.25% w/v) solution of dye in DMF is typically used. Sonication, centrifugation, or filtration (5 μ m pore size) of the concentrated dye solution prior to injection is recommended to remove undissolved dye crystals that might clog the pipette tip. Iontophoretic injection of DiI (5 mg/mL in ethanol) produces precise labeli ng of small groups of 2‑30 cells for lineage tracing studies.

Staining fixed and mounted tissue. Specimens for labeling with dialkylcarbocyanine and dialkylaminostyryl tracers (usually by direct application of dye crystals) are typically fixed in 4% para formaldehyde in 0.1 M phosphate buffer, pH 7.4 at ambient temper ature.38 Other fixatives, particularlyglutaraldehyde, tend to produce unacceptably high levels of background fluorescence. Storage during the time required for diffusive staining of neuronal pathways (typically several weeks) can be at 4℃ or ambient temperature. Permeabil izing reagents, detergents, and high concentrations of organic solvents usually result in loss of staining.3 Tissues stained with DiI and other lipophilic carbocyanines can be sectioned by cryostat or vibratome methods. It is often reported that cryostat sectioning severely degrades the resolution of DiI labeling, but a recent report describes the use of polyethylene glycol (PEG) for this purpose. Avoid mounting media containing glycerol, which can extract membrane-bound dyes.

Labeling cell suspensions or adherent cells. DiI, DiO, and DiD cell-labeling solutions can be added directly to normal culture media to uniformly label suspended or attached culture cells. Cell suspensions or adherent cells on coverslips are incubated with the loading solution for 5 minutes to 2 hours at 37℃. After loading, the cells are spun down, rinsed, and resuspended in fresh medium. For adherent cells, labeling in culture while attache d results in improved viability compared to labeling after dissociation.

表 1. *光谱特性*

Tracer	Ex (nm)	Em (nm)	Optical Filters	
			Omega	Chroma
DiO	484	501	XF23	31001