

Mito-Tracker Green (线粒体绿色荧光探针)

产品编号	产品名称	包装
C1048	Mito-Tracker Green (线粒体绿色荧光探针)	50 μ g

产品简介:

- Mito-Tracker Green, 也称MitoTracker Green, 是一种线粒体(mitochondria)绿色荧光探针, 可以用于活细胞线粒体特异性荧光染色。
- Mito-Tracker Green为采用 Molecular Probes公司的 carbocyanine 进行了荧光标记的一种 Mito-Tracker, 也称 Benzoxazolium, 2-[3-[5,6-dichloro-1,3-bis[[4-(chloromethyl)phenyl]methyl]-1,3-dihydro-2H-benzimidazol-2-ylidene]-1-propenyl]-3-methyl-, chloride。分子式为C₃₄H₂₈C₁₅N₃O, 分子量为671.88, CAS number为201860-17-5, 可以用作线粒体特异性的荧光探针。和Rhodamine 123或JC-1相比, Mito-Tracker Green对于线粒体的染色不依赖于线粒体膜电位。
- Mito-Tracker Green只可以用于对活细胞的染色, 细胞经过固定后会导致荧光会消失。Mito-Tracker Green对活细胞的染色效果参考图1。

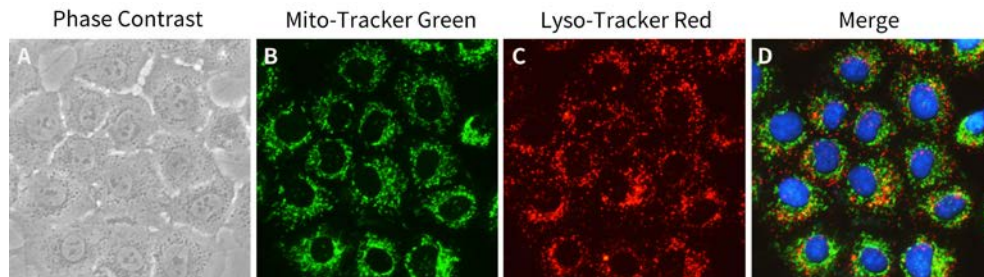


图1. Mito-Tracker Green(线粒体绿色荧光探针)对于NRK-52E细胞(大鼠肾小管上皮细胞)的染色效果。Mito-Tracker Green染色的NRK-52E细胞其线粒体呈现绿色荧光(图B), Lyso-Tracker Red (C1046)染色的NRK-52E细胞其溶酶体呈现红色荧光(图C), 绿色荧光、红色荧光及细胞核蓝色荧光的叠加(merge)效果见图D。其中细胞核使用Hoechst 33342 (C1027)染色。本图仅作参考, 实际检测效果会因实验条件、检测仪器等的不同而存在差异。

- Mito-Tracker Green最大激发光波长为490nm, 最大发射波长为516nm, 呈绿色荧光, Mito-Tracker Green的结构式以及激发光谱和发射光谱参考图2。

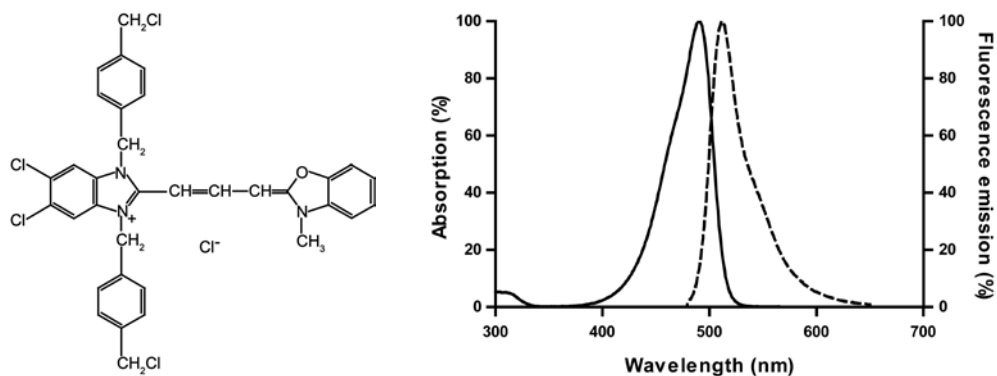


图2. Mito-Tracker Green的结构式(左)以及激发光谱和发射光谱(右)。

- 按最终工作浓度为20-200nM计算, 可以配制约370-3700ml Mito-Tracker Green工作液。

包装清单:

产品编号	产品名称	包装
C1048	Mito-Tracker Green	50 μ g
—	说明书	1份

保存条件:

-20°C避光保存, 半年有效。

注意事项:

- Mito-Tracker Green可以用于活细胞的线粒体荧光标记, 但不适合用于固定细胞的标记。
- 对于微量的液体, 每次使用前先离心数秒钟, 使液体充分沉降到管底。
- 荧光染料均存在淬灭问题, 请尽量注意避光, 以减缓荧光淬灭。
- 需自备盖玻片和载玻片(可以向碧云天订购)。
- 本产品仅限于专业人员的科学研究用, 不得用于临床诊断或治疗, 不得用于食品或药品, 不得存放于普通住宅内。
- 为了您的安全和健康, 请穿实验服并戴一次性手套操作。

使用说明:

1. Mito-Tracker Green储存液的配制:
用无水DMSO(anhydrous dimethylsulfoxide)配制Mito-Tracker Green至终浓度为1mM。配制后可以-20°C或更低温度避光保存。
2. Mito-Tracker Green工作液的配制:
 - a. 取少量1mM Mito-Tracker Green储存液按照1:5000-1:50,000的比例加入到细胞培养液或适当的溶液(例如含钙镁离子的HBSS)中, 使最终浓度为20-200nM。例如取1μl Mito-Tracker Green加入到50ml或5ml细胞培养液或适当的溶液(例如含钙镁离子的HBSS)中。混匀后即为Mito-Tracker Green工作液。HBSS with Ca²⁺ & Mg²⁺ (C0219) 可以向碧云天订购。
 - b. Mito-Tracker Green工作液使用前需37°C预温育。
注: 工作液中Mito-Tracker Green的浓度可以根据实际情况进行适当调整。为降低背景, 在染色效果可以接受的范围内, 建议尽量使用较低浓度的Mito-Tracker Green。
3. 线粒体的荧光标记:
 - a. 去除细胞培养液, 加入步骤2配制好的并37°C预温育的Mito-Tracker Green染色工作液, 与细胞37°C共孵育15-45分钟。
 - b. 去除Mito-Tracker Green染色工作液, 加入37°C预温育的新鲜细胞培养液。
 - c. 随后通常用荧光显微镜或激光共聚焦显微镜进行观察。此时可观察到线粒体呈明亮的强荧光染色。如果染色效果欠佳, 可以提高Mito-Tracker Green染色工作液中Mito-Tracker Green的浓度或在推荐的时间范围内适当延长染色时间。

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