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ER-Tracker Red (内质网红色荧光探针)

产品编号	产品名称	包装
C1041S	ER-Tracker Red (内质网红色荧光探针)	20μl
C1041M	ER-Tracker Red (内质网红色荧光探针)	100μl
C1041L	ER-Tracker Red (内质网红色荧光探针)	500μl

产品简介:

- ER-Tracker Red是一种具有细胞膜通透性的内质网(endoplasmic reticulum, ER)红色荧光探针，对内质网有高度选择性，可以用于活细胞内质网特异性荧光染色。
- ER-Tracker Red为采用Molecular Probes公司的BODIPY TR进行了荧光标记的glibenclamide。Glibenclamide即glyburide，中文名为格列本脲，是一种2型糖尿病治疗药物，可以结合主要定位在内质网上的包含ATP敏感的钾离子通道(K_{ATP} channel)的磺脲类(sulphonylurea)受体。因此荧光标记的glibenclamide就可以用作内质网特异性的荧光探针。ER-Tracker Red适用于活细胞内质网的荧光染色，但不适合用于固定细胞内质网的荧光染色。
- ER-Tracker Red的分子式为$C_{44}H_{42}BClF_2N_6O_7S_2$，分子量为915.23，ER-Tracker Red的化学结构式参考图1。

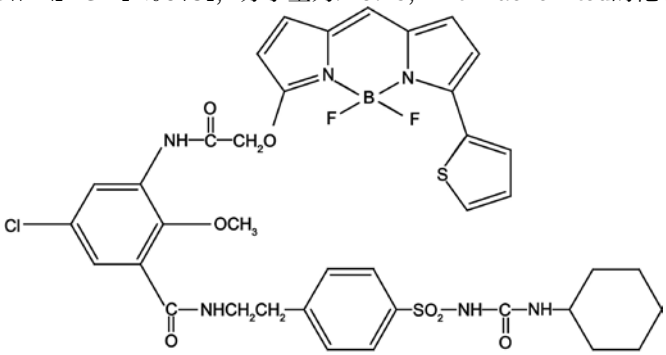

图1. ER-Tracker Red的化学结构式。

- ER-Tracker Red对于细胞的毒性极低。而传统的DiOC6(3)对ER染色的同时也对细胞有一定的毒性。
- ER-Tracker Red呈红色荧光，检测时的最大激发波长为587nm，最大发射波长为615nm。ER-Tracker Red的激发光谱和发射光谱参考图2。

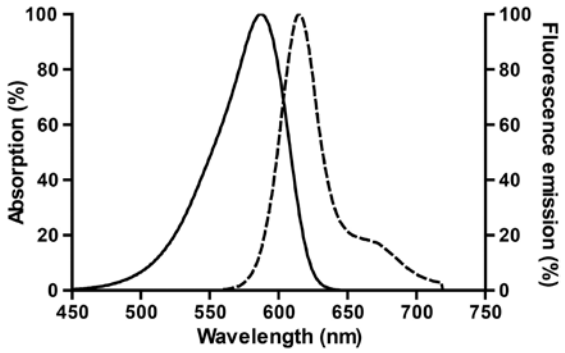

图2. ER-Tracker Red的激发光谱和发射光谱。

- ER-Tracker Red按照后附的使用说明染色后，用甲醛等固定后染色效果可以被部分保留。ER-Tracker Red在活细胞中的染色效果参考图2。

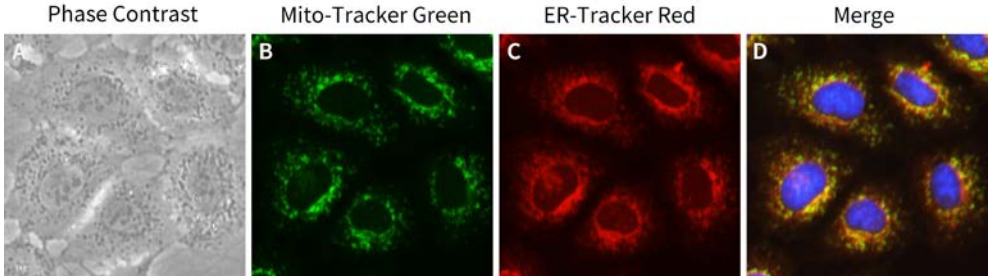

图3. ER-Tracker Red(内质网红色荧光探针)对于NRK-52E细胞(大鼠肾小管上皮细胞)的染色效果。Mito-Tracker Green染色的NRK-52E细胞其线粒体呈现绿色荧光(图B)，ER-Tracker Red染色的NRK-52E细胞其内质网呈现红色荧光(图C)，绿色荧光、红色荧光及细胞核蓝色荧光的叠加(merge)效果见图D。其中细胞核使用Hoechst 33342 (C1027)染色。本图仅作参考，实际检测效果会因实验条件、检测仪器等的不同而存在差异。

- 提供了ER-Tracker Red稀释液，使ER-Tracker Red的使用更加便捷。
- 按照1:1000的比例稀释，每10μl可以配制10ml ER-Tracker Red工作液；按照1:3000的比例稀释，每10μl可以配制30ml ER-Tracker Red工作液。

包装清单：

产品编号	产品名称	包装
C1041S-1	ER-Tracker Red (1mM)	20μl
C1041S-2	ER-Tracker Red稀释液	60ml
—	说明书	1份

产品编号	产品名称	包装
C1041M-1	ER-Tracker Red (1mM)	100μl
C1041M-2	ER-Tracker Red稀释液	250ml
—	说明书	1份

产品编号	产品名称	包装
C1041L-1	ER-Tracker Red (1mM)	500μl
C1041L-2	ER-Tracker Red稀释液	500ml×2
—	说明书	1份

保存条件：

-20°C保存，半年有效。ER-Tracker Red需-20°C避光保存。

注意事项：

- ER-Tracker Red (1mM)在4°C、冰浴等较低温度情况下会凝固而粘在离心管管底、管壁或管盖内，可以20-25°C水浴温育片刻至全部融解后使用。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)。
- 格列本脲的药理学活性可能会影响内质网的一些功能；某些特殊细胞中磺脲类受体的可变表达可能会导致非内质网特异性染色。
- ER-Tracker Red适用于活细胞内质网的荧光染色，但不适合用于固定细胞内质网的荧光染色。如果经ER-Tracker Red染色后的细胞需要进行固定操作，使用4%多聚甲醛在37°C固定2分钟。
- ER-Tracker Red染色后的细胞不能用Triton X-100通透，Triton X-100通透处理会导致ER-Tracker Red的荧光染色消失。
- 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. ER-Tracker Red工作液的配制：
   a. 取少量ER-Tracker Red按照1:1000的比例加入到ER-Tracker Red稀释液中。例如取1μl ER-Tracker Red加入到1ml ER-Tracker Red稀释液中。混匀后即为ER-Tracker Red工作液。
   b. ER-Tracker Red工作液使用前需37°C预温育。
   注：工作液中ER-Tracker Red的浓度可以根据实际情况进行适当调整，推荐的稀释比例调整范围为1:1000-1:3000。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ER-Tracker Red。
2. 内质网的荧光标记：
   a. 去除细胞培养液，用适量的溶液如HBSS with Ca^{2+} & Mg^{2+} (Hanks' Balanced Salt Solution with Ca^{2+} & Mg^{2+})洗涤生长在盖玻片上的细胞。注：HBSS with Ca^{2+} & Mg^{2+} (C0219)可以向碧云天订购；对于悬浮细胞的染色可以参考贴壁细胞的染色方法进行。
   b. 去除洗涤液，加入步骤1配制好的并37°C预温育的ER-Tracker Red染色工作液，与细胞37°C共孵育15-30分钟。
   c. 去除ER-Tracker Red染色工作液，用细胞培养液洗涤细胞1-2次。
   d. 随后通常用荧光显微镜或激光共聚焦显微镜进行观察。此时可观察到内质网呈明亮的强荧光染色。
   e. 如果经ER-Tracker Red染色后的细胞需要进行固定，可以使用4%甲醛37°C固定2分钟。固定后用适当的洗涤液洗涤2-3次，每次5分钟，随后可以进行复染或滴加适当的抗荧光淬灭封片液，最后封片观察。注意：ER-Tracker Red染色的细胞不能用Triton X-100通透，Triton X-100通透处理会导致ER-Tracker Red的荧光染色消失。

相关产品：

产品编号	产品名称	包装
C1002	DAPI	5mg/ml×0.2ml
C1005/C1006	DAPI 染色液	10ml/50ml
C1011	Hoechst 33258	10mg
C1017/C1018	Hoechst 33258 染色液	10ml/50ml
C1022	Hoechst 33342	10mg
C1025/C1026	Hoechst 33342 染色液	10ml/50ml
C1027/C1028/C1029	Hoechst 33342 活细胞染色液(100X)	0.1ml/0.5ml/3ml
C1033	Actin-Tracker Green (微丝绿色荧光探针)	0.2ml
C1036	DiI (细胞膜红色荧光探针)	10mg
C1038	DiO (细胞膜绿色荧光探针)	10mg
C1039-10mg	DiD (细胞膜远红外荧光探针)	10mg
C1041S/M/L	ER-Tracker Red (内质网红色荧光探针)	20μl/100μl/500μl
C1042S/M/L	ER-Tracker Green (内质网绿色荧光探针)	20μl/100μl/500μl
C1043	Golgi-Tracker Red (高尔基体红色荧光探针)	1mg
C1045S	Golgi-Tracker Green (高尔基体绿色荧光探针)	1mg
C1046	Lyso-Tracker Red (溶酶体红色荧光探针)	50μl
C1047S	Lyso-Tracker Green (溶酶体绿色荧光探针)	50μl
C1048	Mito-Tracker Green (线粒体绿色荧光探针)	50μg
C1049B-50μg	Mito-Tracker Red CMXRos (线粒体红色荧光探针)	50μg
C1049B-250μg	Mito-Tracker Red CMXRos (线粒体红色荧光探针)	50μg×5
C1050	Tubulin-Tracker Red (抗体法微管红色荧光探针)	40μl
C1051S	Tubulin-Tracker Green (抗体法微管绿色荧光探针)	40μl
C1991S	细胞膜红色荧光染色试剂盒(DiI)	200-1000次
C1993S	细胞膜绿色荧光染色试剂盒(DiO)	200-1000 次
C1995S	细胞膜远红外荧光染色试剂盒(DiD)	200-1000 次
C2005	JC-1	1mg
C2007	Rhodamine 123	5mg

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