



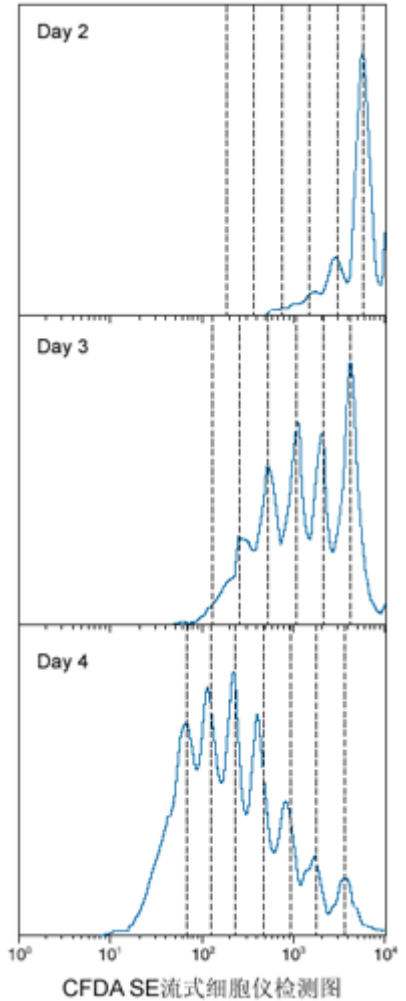
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CFDA SE (细胞增殖示踪荧光探针)

产品编号	产品名称	包装
C1031	CFDA SE (细胞增殖示踪荧光探针)	5mg

产品简介:

- CFDA SE的全称为Carboxyfluorescein diacetate, succinimidyl ester, 是一种近年来被广泛应用的细胞增殖检测用荧光探针, 也可以用于细胞的荧光示踪。
- 基于CFDA SE荧光标记的细胞增殖检测和³H-thymidine掺入、BrdU标记获得的检测结果完全一致, 但同时可以提供更多的细胞增殖信息。使用CFDA SE检测可以提供整个细胞群中有多少比例的细胞分裂了1次、2次或更多次数, 同时如果和其它荧光探针联用, 可以获取不同分裂次数细胞的其它相关信息。
- CFDA-SE的分子式为C₂₉H₁₉NO₁₁, 分子量为557.47, CAS number为150347-59-4。CFDA SE可以通透细胞膜, 进入细胞后可以被细胞内的酯酶(esterase)催化分解成CFSE, CFSE可以偶发性地(spontaneously)并不可逆地和细胞内蛋白的Lysine残基或其它氨基发生结合反应, 并标记这些蛋白。在加入荧光探针CFDA SE后大约24小时, 即可充分标记细胞。被CFDA SE标记的非分裂细胞的荧光非常稳定, 稳定标记的时间可达数月。CFDA SE标记细胞的荧光非常均一, 比以前使用的其它细胞示踪荧光探针例如PKH26的荧光更加均一, 并且分裂后的子代细胞的荧光分配也更均匀。
- 由于CFDA SE标记细胞的荧光非常均匀和稳定, 每分裂一次子代细胞的荧光会减弱一半, 这样通过流式细胞仪检测就可以检测出没有分裂的细胞, 分裂一次的细胞(1/2的荧光强度), 分离两次的细胞(1/4的荧光强度), 分裂三次的细胞(1/8的荧光强度)以及类似的其它分裂次数的细胞。采用CFDA SE通过流式细胞仪检测获得的检测结果参考右图。每一个峰代表一种分裂次数的细胞, 从右至左的峰通常依次为分裂0次、1次、2次、3次等次数的细胞。分裂次数较多后, 分裂0次或1次等没有分裂或分裂次数较少的细胞会逐渐减少直至检测不到。
- 使用CFDA SE可以检测分裂多达8次或更多次数的细胞增殖。
- 目前CFDA SE标记细胞后通常用流式细胞仪进行细胞增殖检测。最常用于淋巴细胞的增殖检测, 也可以用于成纤维细胞、NK细胞等其它细胞的增殖检测, 甚至还可以用于细菌增殖的检测。
- CFDA SE标记细胞呈绿色荧光, 检测时的激发波长可以选择488nm, 此时的发射波长为518nm, 使用流式细胞仪检测时可以采用FL1 detection channel。CFDA SE标记的细胞也可以用荧光显微镜进行观察。
- CFDA SE标记的细胞无论在体外还是体内都不会使邻近细胞染色。即CFDA SE荧光探针完成标记后不会从一个细胞转移到邻近细胞。
- CFDA SE标记细胞仅需5-15分钟即可完成。对于不同细胞, 最佳标记时间需自行摸索。
- CFDA SE可以使用无水DMSO(anhydrous DMSO)配制, 配制浓度通常为2-10mM, 该溶液宜尽快使用, 最长保存时间不宜超过2个月。CFDA SE易被水解, 如用PBS或其他溶液配制好的工作液须尽快使用, 否则在水溶液中会很快变质。在标记细胞的过程中和水接触是在许可的范围内的。CFDA SE标记细胞时的最终浓度通常为0.2-10μM或更高一些。
- 在工作浓度为5μM时, 一个包装的本产品共可以标记约1.8升的细胞。



包装清单:

产品编号	产品名称	包装
C1031	CFDA SE (细胞增殖示踪荧光探针)	5mg
—	说明书	1份

保存条件:

-20°C避光保存, 半年有效。

注意事项:

- 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。
- 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。

使用本产品的文献:

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