



Technical Data Sheet / 技术说明书

Erythroid Differentiation Kit

红细胞诱导分化试剂盒

Catalog Number / 货号: M004

Regulatory Status: For Research Use Only (仅供科研使用)

Product Overview / 产品概览

The erythroid induction and differentiation kit is a cell culture product that efficiently induces hematopoietic stem cells to differentiate into erythroid cells. It is suitable for HSCs derived from cord blood, bone marrow, and mobilized peripheral blood. This product supports efficient in vitro expansion of HSCs and efficient directed differentiation into erythroid cells without the introduction of exogenous genes or feeder layer cells. (红细胞诱导分化试剂盒是一款高效诱导造血干细胞分化为红细胞的细胞培养产品, 对脐带血、骨髓、动员外周血来源的HSC均适用。本产品可在不引入外源性基因和无饲养层细胞的条件下, 支持HSC的体外高效扩增, 并高效率定向分化为红细胞。)

Product Information / 产品信息

Cat	Kit components	Specifications	Usage & Storage
M003	Humanized stem cell culture medium	100 mL/500 mL	Stored in the dark at 2~8 °C, with a shelf life of 12 months
	Nutritional additives for stem cell culture medium	5 mL/25 mL	Stored in the dark at -15~-25 °C, with a shelf life of 12 months
CC01	Erythroid differentiation additive A	1 mL/5 mL	Stored in the dark at -15~-25 °C, with a shelf life of 12 months
CC04	Erythroid differentiation additive B	1 mL/5 mL	Stored in the dark at -15~-25 °C, with a shelf life of 12 months
CC05	Erythroid differentiation additive C	1 mL/5 mL	Stored in the dark at -15~-25 °C, with a shelf life of 12 months
CC06	Erythroid differentiation additive D	1 mL/5 mL	Stored in the dark at -15~-25 °C, with a shelf life of 12 months



S005	干细胞专用血清	20 mL/80 mL	Stored in the dark at -15~-25 °C, with a shelf life of 12 months
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Medium Preparation / 培养基的配制

1. Thaw nutritional additives, erythroid differentiation supplements A/B/C/D, and FBS at 4°C. Please ensure to perform a centrifugation operation before use. (在4°C解冻营养添加剂、红细胞分化添加剂 A/B/C/D、干细胞专用血清, 使用前请务必进行离心操作。)
2. In a sterile biosafety cabinet, add nutritional additives to the basic medium at a ratio of 5%, mix thoroughly, and obtain HSC basic medium. (在无菌生物安全柜中, 向基础培养基中以 5%的比例加入营养添加剂, 充分混匀, 得到 HSC 基础培养基。)
3. In a sterile biosafety cabinet, add erythroid differentiation supplements A/B/C/D to HSC basal medium at a ratio of 1%, mix thoroughly to obtain erythroid differentiation medium A/B/C/D. (在无菌生物安全柜中, 向 HSC 基础培养基中以 1%的比例加入红细胞分化添加剂 A/B/C/D, 充分混匀, 得到红细胞分化培养基 A/B/C/D。)

Cell Culture / 细胞培养

Step 1 (第一步):

1. D0: the HSC density was adjusted to 1×10^5 cells /ml by using erythroid differentiation medium A, which was placed in a cell incubator at 37 °C, 5% CO₂, and cultured statically. (使用红细胞分化培养基 A 将 HSC 密度调整为 1×10^5 /mL 接种, 置于细胞培养箱, 37°C, 5% CO₂, 静置培养。)
2. D3/4: count the cells, adjust the HSC density to 1×10^5 cells /ml using erythroid differentiation medium A, and continue to culture after passaging. (D3/4: 进行细胞计数, 使用红细胞分化培养基 A 将 HSC 密度调整为 1×10^5 /mL, 传代后继续培养。)

Step 2 (第二步):

1. D6: Centrifuge the cells at low speed, remove the supernatant, replace with erythroid differentiation medium B, and add 15% (V/V) FBS. (D6: 低速离心细胞, 去上清, 更换为红细胞分化培养基 B, 并加入 15% (V/V) 干细胞专用血清。)
2. D8/9: same as Step 2 in the first step. (D8/9: 同第一步的步骤 2。)

Step 3 (第三步):

1. D13: Centrifuge the cells at low speed, remove the supernatant, replace with erythroid differentiation medium C, and add 15% (V/V) FBS. (D13: 低速离心细胞, 去上清, 更换为红细胞分化培养基 C, 并加入 15% (V/V) 干细胞专用血清。)



2. D15/16: same as Step 2 in the first step. (D15/16: 同第一步的步骤 2。)

Step 4 (第四步) :

1. D19: centrifuge the cells at low speed, remove the supernatant, and replace with erythroid differentiation medium D. (D19: 低速离心细胞, 去上清, 更换为红细胞分化培养基 D。)
2. D21: gently blow the cells and collect the suspended cells, which are the induced erythrocytes ready for subsequent operations and analysis. (轻轻吹打细胞, 收集悬浮细胞, 即为诱导的红细胞, 可进行后续操作和分析。)

Precautions / 注意事项

- If the dosage per use is small, the additives can be repackaged and stored at -15 to -25°C to avoid repeated freeze-thaw cycles. (如每次使用剂量较少, 可将添加剂分装后置于-15~-25°C保存, 避免反复冻融。)
- The prepared medium can be stored at 4°C for no more than 1 week. (配制好的培养基可置于 4°C保存, **保存期限不超过 1 周**。)
- This product is for research or further study only, not for diagnosis and treatment. (本产品仅用于科研或进一步研究使用, 不用于诊断和治疗。)

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