



Technical Data Sheet / 技术说明书

Neutrophil Differentiation Kit

中性粒细胞诱导分化试剂盒

Catalog Number / 货号: M005

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

Product Overview / 产品概览

The neutrophil differentiation kit is a cell culture product that efficiently induces hematopoietic stem cells to differentiate into neutrophils, and is applicable to cord blood, bone marrow, and mobilized peripheral blood derived HSCs. This product can support the efficient expansion of HSCs in vitro without introducing exogenous genes and feeder layer cells, and differentiate into neutrophils with high efficiency. (中性粒细胞诱导分化试剂盒是一款高效诱导造血干细胞分化为中性粒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中性粒细胞。)

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	Neutrophil differentiation additive A	1 mL/5 mL	Stored in the dark at -15~-25 °C, with a shelf life of 12 months
CC07	Neutrophil differentiation additive B	1 mL/5 mL	Stored in the dark at -15~-25 °C, with a shelf life of 12 months
CC08	Neutrophil differentiation additive C	1 mL/5 mL	Stored in the dark at -15~-25 °C, with a shelf life of 12 months
CC09	Neutrophil 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	25 mL/60 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, neutrophil 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、中性粒细胞分化添加剂 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 neutrophil differentiation supplements A/B/C/D to HSC basal medium at a ratio of 1%, mix thoroughly to obtain neutrophil 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% 的比例加入中性粒细胞分化添加剂 A/B/C/D, 充分混匀, 得到中性粒细胞分化培养基 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 neutrophil differentiation medium A, which was placed in a cell incubator at 37 °C, 5% CO₂, and cultured statically. (使用中性粒细胞分化培养基 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 neutrophil differentiation medium A, and continue to culture after passaging. (D3/4: 进行细胞计数, 使用中性粒细胞分化培养基 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. D7: Centrifuge the cells at low speed, remove the supernatant, replace with neutrophil differentiation medium B, and add 10% (V/V) FBS. (D7: 低速离心细胞, 去上清, 更换为中性粒细胞分化培养基 B, 并加入 10% (V/V) 干细胞专用血清。)

Step 3 (第三步):

1. D10: Centrifuge the cells at low speed, remove the supernatant, replace with neutrophil differentiation medium C, and add 10% (V/V) FBS. (D10: 低速离心细胞, 去上清, 更换为中性粒细胞分化培养基 C, 并加入 10% (V/V) 干细胞专用血清。)
2. D12/13: same as Step 2 in the first step. (D12/13: 同第一步的步骤 2。)



Step 4 (第四步) :

1. D16: centrifuge the cells at low speed, remove the supernatant, and replace with neutrophil differentiation medium D. (D16: 低速离心细胞, 去上清, 更换为中性粒细胞分化培养基 D。)
2. D18: Gently blow the cells and collect the suspended cells, i.e. induced neutrophils, for subsequent operation and analysis. (轻轻吹打细胞, 收集悬浮细胞, 即为诱导的中性粒细胞, 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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