

NaïveCult™ Expansion Medium

Defined cell culture medium for expansion of reset naïve human ES and iPS cells

Catalog #05590 500 mL



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Product Description

NaïveCult™ Expansion Medium is a defined medium for the robust expansion of reset naïve human embryonic stem (ES) and induced pluripotent stem (iPS) cells. This medium was developed under license from the Cambridge Stem Cell Institute at the University of Cambridge, UK based on the t2iL + G0 formulation developed by Austin Smith. It is compatible with reset naïve human ES and iPS cells derived using NaïveCult™ Induction Kit (Catalog #05580), transgene-induced reset human pluripotent stem cells (hPSCs) (Takashima et al.), or embryo-derived reset hPSCs (Guo et al. 2016). Reset naïve human hPSCs cultured in NaïveCult™ Expansion Medium demonstrate uniformly domed, phase-bright colonies with refractive edges and maintain gene expression profiles associated with reset naïve hPSCs (Guo et al. 2016; Guo et al. 2017; Takashima et al.).

Product Information

The following components are sold as a kit and are not available for individual sale.

NAME	COMPONENT #	SIZE	STORAGE	SHELF LIFE
NaïveCult™ Expansion Basal Medium	05591	400 mL	Store at 2 - 8°C.	Stable for 15 months from date of manufacture (MFG) on label.
NaïveCult™ 5X Expansion Supplement*	05592	100 mL	Store at -20°C.	Stable for 15 months from date of manufacture (MFG) on label.
NaïveCult™ 1000X Expansion Supplement**	05593	500 µL	Store at -20°C.	Stable for 2 years from date of manufacture (MFG) on label.

*This component contains material derived from human plasma. Donors have been tested and found negative for HIV-1 and -2, hepatitis B, and hepatitis C prior to donation. However, this product should be considered potentially infectious and treated in accordance with universal handling precautions.

**Please refer to the Safety Data Sheet (SDS) for hazard information. This product contains components dissolved in dimethyl sulfoxide (DMSO). DMSO is a strong solvent and skin penetrant, and can transport many substances through the skin. DMSO can also penetrate some protective glove materials including latex and silicone. Extra caution should be utilized when handling this product.

Preparation of NaïveCult™ Expansion Medium

Use sterile techniques to prepare NaïveCult™ Expansion Medium (Basal Medium + 5X Expansion Supplement + 1000X Expansion Supplement). The following example is for preparing 100 mL of medium. If preparing other volumes, adjust accordingly.

1. Thaw Supplements at room temperature (15 - 25°C). Mix each Supplement thoroughly.
NOTE: If not used immediately, aliquot Supplements and store at -20°C. Do not exceed the shelf life of the Supplements. After thawing aliquots, use immediately. Do not re-freeze.
2. Add 20 mL of 5X Expansion Supplement and 100 µL of 1000X Expansion Supplement to 80 mL of Basal Medium. Mix thoroughly.
NOTE: If not used immediately, store NaïveCult™ Expansion Medium at 2 - 8°C for up to 1 week.

Directions for Use

For complete instructions, refer to the Technical Manual: Reversion and Maintenance of Naïve-Like Human Pluripotent Stem Cells with NaïveCult™ Induction Kit and NaïveCult™ Expansion Medium (Document #DX21865), available at www.stemcell.com or contact us to request a copy.

Related Products

For related products, including specialized culture and storage media, small molecules, supplements and antibodies, visit www.stemcell.com or contact us at techsupport@stemcell.com.

References

Guo G et al. (2016) Naive pluripotent stem cells derived directly from isolated cells of the human inner cell mass. *Stem Cell Reports* 6(4): 437–46.

Guo G et al. (2017) Epigenetic resetting of human pluripotency. *Development* 144(15): 2748–63.

Takashima Y et al. (2014) Resetting transcription factor control circuitry toward ground-state pluripotency in human. *Cell* 158(6): 1254–69.

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