

RSeT™ Medium

Defined medium for naïve-like human pluripotent stem cells



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Catalog #05970

500 mL Kit

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Product Description

RSeT™ Medium is a defined cell culture medium used for the reversion of primed human pluripotent stem cells (hPSCs) to a naïve-like state and maintenance of naïve-like hPSCs under feeder-dependent and hypoxic conditions. RSeT™ Medium contains pre-screened quality components and does not contain bFGF or TGFβ. It is compatible with human embryonic stem (ES) cells and human induced pluripotent stem (iPS) cells.

hPSCs cultured in RSeT™ Medium exhibit features of a naïve-like state such as tightly-packed, domed colonies with refractive edges. Key transcripts associated with naïve-like hPSCs such as KLF2, KLF4, and TFCP2L1 show increased expression in hPSCs cultured in RSeT™ Medium. RSeT™ hPSCs can be converted back to a primed state by culture in mTeSR™1 and can then be differentiated with STEMdiff™ products such as STEMdiff™ Definitive Endoderm Kit (Catalog #05110), STEMdiff™ Neural Induction Medium (Catalog #05835), and STEMdiff™ Mesoderm Induction Medium (Catalog #05220).

Product Information

The following components are sold as a complete kit (Catalog #05970) and are not available for individual sale.

COMPONENT NAME	COMPONENT #	SIZE	STORAGE	SHELF LIFE
RSeT™ Basal Medium	05971	398.5 mL	Store at 2 - 8°C.	Stable for 12 months from date of manufacture (MFG) on label.
RSeT™ 5X Supplement*	05972	100 mL	Store at -20°C.	Stable until expiry date (EXP) on label.
RSeT™ 500X Supplement*	05973	1 mL	Store at -20°C.	Stable until expiry date (EXP) on label.
RSeT™ 1000X Supplement**	05974	0.5 mL	Store at -20°C.	Stable until expiry date (EXP) on label.

*This product 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 Complete RSeT™ Medium

Use sterile techniques when preparing complete RSeT™ Medium (Basal Medium + 5X Supplement + 500X Supplement + 1000X Supplement). The following example is for preparing 100 mL of complete medium. If preparing other volumes, adjust accordingly.

1. Thaw the supplements at room temperature (15 - 25°C) or at 2 - 8°C overnight. Ensure supplements are evenly resuspended after thawing.

NOTE: Once thawed, use immediately or aliquot and store at -20°C. Do not exceed the shelf life of the individual supplements. After thawing the aliquots, use immediately. Do not re-freeze.

2. Add 20 mL of 5X Supplement to 79.7 mL of Basal Medium. Mix thoroughly.
3. Add 200 µL of 500X Supplement. Mix thoroughly.
4. Add 100 µL of 1000X Supplement. Mix thoroughly.

NOTE: If not used immediately, store complete RSeT™ Medium at 2 - 8°C for up to 1 week. Warm complete medium to room temperature (15 - 25°C) before use. Protect from exposure to direct light.

Directions for Use

For complete instructions on how to maintain human naïve stem cells in RSeT™ Medium, refer to the Technical Manual: Reversion and Maintenance of Human Naïve Pluripotent Stem Cells with RSeT™ Medium (Document #DX20658) available at www.stemcell.com or contact us to request a copy.

Assessment of hPSCs

The following antibodies can be used to characterize hPSCs by flow cytometry or immunocytochemistry:

- Anti-Human SSEA-4 Antibody, Clone MC-813-70 (Catalog #60062)
- Anti-Human TRA-1-60 Antibody, Clone TRA-1-60R (Catalog #60064)
- Anti-Human OCT4 (OCT3) Antibody, Clone 3A2A20 (Catalog #60093)

Related Products

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

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