

mTeSR™3D

Serum-free media for suspension culture of hESCs and hiPSCs

Catalog #03950

1 Kit



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Product Description

mTeSR™3D is a serum-free medium kit developed for expansion and scale-up of undifferentiated human embryonic stem cells (hESCs) and human induced pluripotent stem cells (hiPSCs) as aggregates in 3D suspension culture.

Based on mTeSR™1, the most widely published feeder-free cell culture medium for hESCs and hiPSCs, mTeSR™3D is a robust formulation with an optimized protocol for scaling up hESCs and hiPSCs production in suspension culture. The novel fed-batch workflow saves time and media; daily feeds replenish nutrients and eliminate the need for medium exchanges on non-passaging days.

The mTeSR™3D system is compatible with cells previously cultured in mTeSR™1 (Catalog #85850), mTeSR™ Plus (Catalog #100-0276), TeSR™-E8™ (Catalog #05990), or TeSR™-AOF (Catalog #100-0401) on Corning® Matrigel® hESC-Qualified Matrix (Corning Catalog #354277), and is compatible with a range of suspension culture vessels.

Product Information

The following components are sold as part of the mTeSR™3D medium kit (Catalog #03950) and are not available for individual sale.

COMPONENT NAME	COMPONENT #	SIZE	STORAGE	SHELF LIFE
mTeSR™3D Seed Basal Medium	03951	400 mL	Store at 2 - 8°C.	Stable until expiry date (EXP) on label.
mTeSR™3D Seed 5X Supplement	03952	100 mL	Store at -20°C.	Stable until expiry date (EXP) on label.
mTeSR™3D Feed Supplement A	03953	100 mL	Store at -20°C.	Stable until expiry date (EXP) on label.
mTeSR™3D Feed Supplement B	03954	12 mL	Store at 2 - 8°C.	Stable until expiry date (EXP) on label.

Preparation of mTeSR™3D Seed Medium and Feed Medium

Use sterile technique to prepare mTeSR™3D Seed Medium (Basal Medium + 5X Supplement) and Feed Medium (Feed Supplement A + Feed Supplement B).

NOTE: Thaw supplements or complete media at room temperature (15 - 25°C) or overnight at 2 - 8°C. Do not thaw in a 37°C water bath.

A. mTeSR™3D Seed Medium

The following example is for preparing 500 mL of medium. If preparing other volumes, adjust accordingly.

1. Thaw mTeSR™3D Seed 5X Supplement and mix thoroughly.

NOTE: Supplement may appear slightly cloudy after thawing. If this is noted, place in a 37°C water bath for ~5 minutes, swirling occasionally until supplement becomes clear. Supplement must be free of cloudiness before adding to basal medium.

NOTE: Once thawed, use supplement immediately or aliquot and store at -20°C for up to 3 months. Do not exceed the shelf life of the supplement. After thawing the aliquoted supplement, use immediately. Do not re-freeze.

2. Add 100 mL of mTeSR™3D Seed 5X Supplement to 400 mL of mTeSR™3D Seed Basal Medium. Mix thoroughly.

NOTE: If not used immediately, store complete mTeSR™3D Seed Medium at 2 - 8°C for up to 2 weeks. Alternatively, aliquot and store at -20°C for up to 6 months. Do not exceed the shelf life of the individual components. After thawing the aliquoted medium, use immediately or store at 2 - 8°C for up to 2 weeks. Do not re-freeze.

If desired, the medium can be filtered using a 0.2 µm low-protein binding filter.

3. Immediately before use, add 10 µM Y-27632 (Dihydrochloride; Catalog #72302). Mix thoroughly.

B. mTeSR™3D Feed Medium

The following example is for preparing 112 mL of mTeSR™3D Feed Medium. If preparing other volumes, adjust accordingly.

1. Thaw mTeSR™3D Feed Supplement A and mix thoroughly.

NOTE: Once thawed, use supplement immediately or aliquot and store at -20°C for up to 3 months. Do not exceed the shelf life of the supplement. After thawing the aliquoted supplement, use immediately. Do not re-freeze.

2. Add 12 mL of mTeSR™3D Feed Supplement B to 100 mL of mTeSR™3D Feed Supplement A. Mix thoroughly.

NOTE: Store mTeSR™3D Feed Medium at 2 - 8°C for up to 2 weeks. Alternatively, aliquot and store at -20°C for up to 3 months. Do not exceed the shelf life of the individual components. After thawing the aliquoted Feed Medium, use immediately or store at 2 - 8°C for up to 2 weeks. Do not re-freeze.

NOTE: If prepared aseptically, mTeSR™3D Feed Medium is ready for use. If desired, the medium can be filtered using a 0.2 µm low-protein binding filter.

Directions for Use

For complete instructions on culturing hESCs and hiPSCs in mTeSR™3D, refer to the Technical Manual: Expansion of Human Pluripotent Stem Cells as Aggregates in Suspension Culture Using mTeSR™3D (Document #1000005520), available at www.stemcell.com, or contact us to request a copy.



mTeSR™3D is manufactured and sold under global exclusive license from Accellta for culture medium for hPSCs in suspension under feeder-free, non-adherent conditions.



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