TeSR™-E8™

Feeder-free, animal component-free culture medium for maintenance of hESCs and hiPSCs

Catalog #05990 1 Kit

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Product Description

TeSR™-E8™ is a feeder-free, animal component-free culture medium for human embryonic stem cells (hESCs) and induced pluripotent stem cells (hiPSCs; e.g. Healthy Control Human iPSC Line, Female, SCTi003-A, Catalog #200-0511). It is based on the E8™ formulation[1-2] published by Dr. James Thomson (University of Wisconsin-Madison), the lead researcher behind the mTeSR™1 formula[3-4]. TeSR™-E8™ contains a minimal set of the components required for maintenance of hESCs and hiPSCs, providing a simpler medium for the culture of pluripotent stem cells. This medium lacks albumin, so it is low in protein compared to other conventional feeder-free culture media such as mTeSR™1 (Catalog #85850), TeSR™-AOF (Catalog #100-0401), and mTeSR™ Plus (Catalog #100-0276).

TeSR™-E8™ may be used with either Vitronectin XF™ (Catalog #07180, a matrix developed and manufactured by Nucleus Biologics) or Corning® Matrigel® hESC-Qualified Matrix (Corning Catalog #354277) as the culture matrix.

Each lot of TeSR™-E8™ 25X Supplement is used to prepare complete TeSR™-E8™ medium and then performance-tested in a culture assay using human pluripotent stem cells (hPSCs).

Product Information

The following components are sold as a complete kit (Catalog #05990) and are not available for individual sale.

COMPONENT NAME	COMPONENT #	SIZE	STORAGE	SHELF LIFE
TeSR™-E8™ Basal Medium	05991	480 mL	Store at 2 - 8°C.	Stable for 2 years from date of manufacture (MFG) on label.
TeSR™-E8™ 25X Supplement	05992	20 mL	Store at -20°C.	Stable for 2 years from date of manufacture (MFG) on label.

Please refer to the Safety Data Sheet (SDS) for hazard information.

Preparation of Complete TeSR™-E8™ Medium

Use sterile technique to prepare complete TeSR™-E8™ medium (TeSR™-E8™ Basal Medium + TeSR™-E8™ 25X Supplement). The following example is for preparing 500 mL of complete medium. If preparing other volumes, adjust accordingly.

1. Thaw TeSR™-E8™ 25X Supplement at room temperature (15 - 25°C) or overnight at 2 - 8°C. Do not thaw in a 37°C water bath. Mix thoroughly.

   NOTE: Once thawed, use supplement immediately. Do not re-freeze.
2. Add (pipette) 20 mL of TeSR™-E8™ 25X Supplement to 480 mL of TeSR™-E8™ Basal Medium. Mix thoroughly.

   NOTE: If not using immediately, store complete TeSR™-E8™ medium in one of the following containers:
   - TeSR™-E8™ Basal Medium bottle
   - 50 mL polypropylene tubes (e.g. Catalog #100-0090)

   Do not use other storage containers.
3. Store complete 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 complete medium, use immediately or store at 2 - 8°C for up to 2 weeks. Do not re-freeze.

   NOTE: Thaw complete medium at room temperature or overnight at 2 - 8°C. Do not thaw in a 37°C water bath.

If prepared aseptically, complete TeSR™-E8™ medium is ready for use and does not require filtering.

Directions for Use

For complete instructions on maintaining hESCs and hiPSCs in TeSR™-E8™, refer to the Technical Manual: Maintenance of Human Pluripotent Stem Cells in TeSR™-E8™ (Document #10000005516), available at www.stemcell.com, or contact us to request a copy.

References

1. Chen G et al. (2011) Chemically defined conditions for human iPSC derivation and culture. Nat Methods 8(5): 424–9.
2. Beers J et al. (2012) Passaging and colony expansion of human pluripotent stem cells by enzyme-free dissociation in chemically defined culture conditions. Nat Protoc 7(11): 2029–40.
3. Ludwig TE et al. (2006) Derivation of human embryonic stem cells in defined conditions. Nat Biotechnol 24(2): 185–7.
4. Ludwig TE et al. (2006) Feeder-independent culture of human embryonic stem cells. Nat Methods 3(8): 637–46.