TeSR™2

Xeno-free, defined, feeder-free medium for maintenance of undifferentiated human ES and iPS cells

Catalog #05860 500 mL Kit
Catalog #05880 10 x 500 mL Kit

STEMCELL™ TECHNOLOGIES
Scientists Helping Scientists™ | WWW.STEMCELL.COM
TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713
INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM
FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

Product Description

TeSR™2 is a complete, xeno-free, serum-free, defined formulation designed for the feeder-free maintenance and expansion of human embryonic stem (ES) and induced pluripotent stem (iPS) cells in the undifferentiated state.[1] Complete TeSR™2 medium (Basal Medium + 5X Supplement + 250X Supplement) contains recombinant human basic fibroblast growth factor (rh bFGF) and recombinant human transforming growth factor β (rh TGFβ). Addition of further growth factors is not required.

TeSR™2 may be used with Corning® Matrigel® hESC-Qualified Matrix (Corning Catalog #354277) or Vitronectin XF™ (Catalog #07180, a matrix developed and manufactured by Nucleus Biologics) as the culture matrix.

Each lot of TeSR™2 5X Supplement and 250X Supplement is used to prepare complete TeSR™2 medium and then performance-tested in a culture assay using human pluripotent stem cells (hPSCs).

Product Information

PRODUCT NAME	CATALOG #	SIZE	COMPONENTS
TeSR™2	05860	500 mL	• TeSR™2 Basal Medium (400 mL) • TeSR™2 5X Supplement (100 mL) • TeSR™2 250X Supplement (2 mL)
TeSR™2	05880	10 x 500 mL	• TeSR™2 Basal Medium (10 x 400 mL) • TeSR™2 5X Supplement (10 x 100 mL) • TeSR™2 250X Supplement (10 x 2 mL)

Component Storage and Stability

The following components are sold as complete kits (Catalog #05860 and #05880) and are not available for individual sale.

COMPONENT NAME	COMPONENT #	STORAGE	SHELF LIFE
TeSR™2 Basal Medium	05861	Store at 2 - 8°C.	Stable until expiry date (EXP) on label.
TeSR™2 5X Supplement	05862	Store at -20°C.	Stable until expiry date (EXP) on label.
TeSR™2 250X Supplement	05863	Store at -20°C.	Stable until expiry date (EXP) on label.

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

Preparation of Complete TeSR™2 Medium

Use sterile technique to prepare complete TeSR™2 medium (Basal Medium + 5X Supplement + 250X Supplement). The following example is for preparing 500 mL of complete medium. If preparing other volumes, adjust accordingly.

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

1. Thaw TeSR™2 5X Supplement and TeSR™2 250X Supplement. Mix each supplement thoroughly.

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

2. Add 100 mL of TeSR™2 5X Supplement and 2 mL of TeSR™2 250X Supplement to 400 mL of TeSR™2 Basal Medium. Mix thoroughly.

   NOTE: If not used immediately, store complete TeSR™2 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.

   If prepared aseptically, complete TeSR™2 medium is ready for use. If desired, the medium can be filtered using a 0.2 - 0.22 µm low protein binding polyethersulfone (PES) filter unit (e.g. Fisher 09-741-04 [0.2 µm, 250 mL]; Fisher SCGP00525 [0.22 µm, 50 mL]).

Directions for Use

For complete instructions on maintaining human ES and iPS cells in TeSR™2, refer to the Technical Manual: Maintenance of Human Pluripotent Stem Cells in TeSR™2 (Document #10000005573), 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)

For complete flow cytometry protocols and antibodies that can be used, refer to the Technical Manual: Maintenance of Human Pluripotent Stem Cells in mTeSR™1 (Document #10000005505), available at www.stemcell.com or contact us to request a copy.

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.

References

1. Ludwig TE et al. (2006) Derivation of human embryonic stem cells in defined conditions. Nat Biotechnol 24(2): 185–7.