

TeSR™2

Animal Protein-Free Medium for the Maintenance of hESCs and hiPSCs

For optimal results, ensure that lot numbers of all components end with the same letter.

PRODUCT DESCRIPTION

TeSR™2 Animal Protein-Free Medium (Catalog #05860/05880) is a complete, animal protein-free, serum-free, defined formulation designed for the feeder-independent maintenance and expansion of human embryonic and induced pluripotent stem cells (hESCs and hiPSCs) in the undifferentiated state.¹ Complete TeSR™2 Animal Protein-Free Medium (Basal Medium + 5X Supplement + 250X Supplement) contains recombinant human basic fibroblast growth factor (rh bFGF) and recombinant human transforming growth factor β (rh TGF β). Addition of further growth factors is not required. TeSR™2 Animal Protein-Free Medium is formulated for use with BD Matrigel™ hESC-qualified Matrix-coated surfaces (BD Catalog #354277). This BD Matrigel™ has been qualified as TeSR™2-compatible by STEMCELL Technologies Inc.

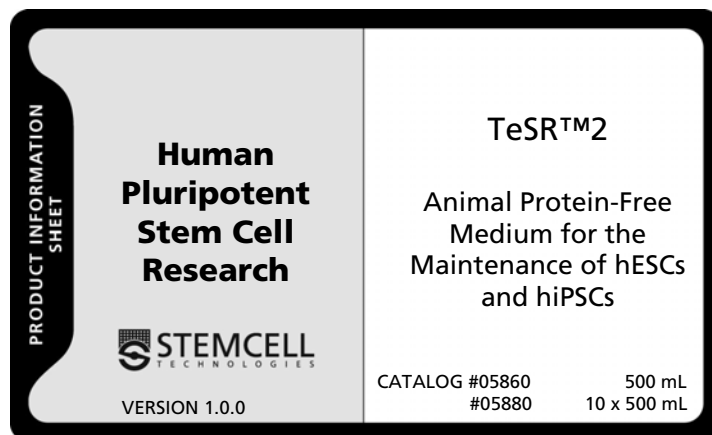
Each batch of TeSR™2 is sterility-tested before being performance tested as follows: H1 or H9 hESCs are cultured in TeSR™2 Animal Protein-Free Medium prepared with test batch of 5X Supplement and 250X Supplement and cultured for ≥ 3 passages. Results are compared to a TeSR™2 Animal Protein-Free Medium laboratory standard cultured in parallel. A certificate of analysis is available on request.

COMPONENT DESCRIPTIONS:

PRODUCT NAME	TeSR™2 BASAL MEDIUM
Component Number	05861
Unit Size	400 mL
Stability and Storage Conditions	Product stable at 2 - 8°C until expiry date as indicated on label.

PRODUCT NAME	TeSR™2 5X SUPPLEMENT
Component Number	05862
Unit Size	100 mL
Stability and Storage Conditions	Product stable at -20°C until expiry date as indicated on label. Thaw up to 2 times.

PRODUCT NAME	TeSR™2 250X SUPPLEMENT
Component Number	05863
Unit Size	2 mL
Stability and Storage Conditions	Product stable at -20°C until expiry date as indicated on label. Thaw up to 2 times.



COMPLETE MEDIUM SPECIFICATIONS:

PARAMETER	SPECIFICATION
Osmolarity	330 – 350 mOsm
pH	7.25 – 7.45

STABILITY AND STORAGE

Complete TeSR™2 Animal Protein-Free Medium is stable at 2 - 8°C for up to 2 weeks.

Complete medium can be stored at -20°C after preparation and is stable for up to 6 months. Thaw complete medium at room temperature (15 - 25°C) or overnight at 2 - 8°C.

This product has been aseptically manufactured using tightly controlled processes and extensively pre-screened components.

PREPARATION

1. For optimal results, ensure that lot numbers of all components end with the same letter (e.g. A).

Contact STEMCELL Technologies' Technical Support if assistance is required at techsupport@stemcell.com.

2. Thaw TeSR™2 5X Supplement (Component #05862) and TeSR™2 250X Supplement (Component #05863) at room temperature (15 - 25°C) or overnight at 2 - 8°C.

If desired, 5X Supplement and 250X Supplement can be aseptically dispensed into working aliquots and stored frozen at -20°C. Use aliquots within 3 months. Thawed aliquots should be used within 1 day to prepare complete TeSR™2 Animal Protein-Free Medium. Do not refreeze aliquots after thawing.

3. Aseptically add the entire 100 mL of thawed 5X Supplement (Component #05862) and the entire 2 mL of thawed 250X Supplement (Component #05863) to 400 mL Basal Medium (Component #05861) for a total volume of 500 mL. Mix well. The complete TeSR™2 Animal Protein-Free Medium is stable when stored at 2 - 8°C for up to 2 weeks.

If prepared aseptically, TeSR™2 Animal Protein-Free Medium is ready for use but the medium can also be filtered using a 0.2 μ m, low-protein binding filter, if desired.



DIRECTIONS FOR USE

For complete instructions on how to maintain hESCs in TeSR™2 Animal Protein-Free Medium see the mTeSR®1 and TeSR™2 Technical Manual (Manual Catalog #29106) available on our website at www.stemcell.com/technical/manuals.aspx. BD Matrigel™ hESC-qualified Matrix is available from BD (Catalog #354277).

RELATED PRODUCTS

PRODUCT	CATALOG #
mTeSR®1 Maintenance Medium for hESCs & hiPSCs	05850/05870/05875
AggreWell™400 plates for the reproducible formation of uniformly sized embryoid bodies	27845/27945
Anti-Oct 3/4 antibody	01550/01551
Anti-SSEA-1 antibody	01552
Anti-SSEA-3 antibody	01553
Anti-SSEA-4 antibody	01554
Anti-TRA-1-60 antibody	01555
Anti-TRA-1-81 antibody	01556
Anti-TRA-2-49 antibody	01557
Anti-TRA-2-52 antibody	01558
FITC-conjugated goat anti-mouse IgG	10210
FITC-conjugated goat anti-mouse IgM	10211
APC-conjugated goat anti-rat IgM	10215
mFreSR® defined cryopreservation medium for hESCs and hiPSCs	05855/05854
CryoStor™CS10 defined, animal protein-free cryopreservation medium for hESCs and hiPSCs	07930
ACCUTASE®	07920
Dispase (1 mg/mL)	07923

REFERENCES

- Ludwig TE, Levenstein ME, Jones JM, Berggren WT, Mitchen ER, Frane JL, Crandall LJ, Daigh CA, Conard KR, Piekarczyk MS, Llanas RA, Thomson JA: Derivation of human embryonic stem cells in defined conditions. *Nature Biotechnology* 24: 185-187, 2006



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