

TeSR™2

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

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.

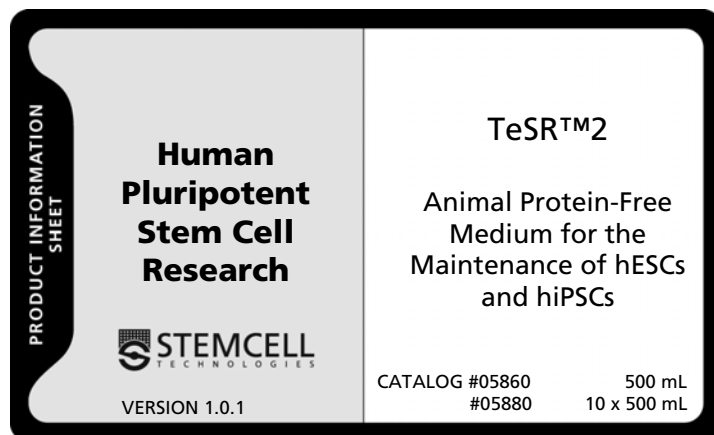
Each batch of TeSR™2 is sterility-tested before being performance tested as follows: H1 or H9 hESCs are cultured in TeSR™2 Animal Protein-Free Medium prepared with test batch of 5X Supplement and 250X Supplement and cultured for ≥ 3 passages. Results are compared to a TeSR™2 Animal Protein-Free Medium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

2. 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.



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IN NORTH AMERICA TOLL-FREE T. 1 800 667 0322 TOLL-FREE F. 1 800 567 2899 T. 1 604 877 0713 F. 1 604 877 0704 E. INFO@STEMCELL.COM

IN EUROPE T. +33 (0)4 76 04 75 30 F. +33 (0)4 76 18 99 63 T. +33 (0) 4 76 04 75 30 F. +33 (0) 4 76 18 99 63 E. INFO.EU@STEMCELL.COM

IN AUSTRALIA TOLL-FREE T. 1 800 060 350 F. +61 (03) 9338 4320 E. INFO.AUS@STEMCELL.COM

IN SINGAPORE T. (65) 6776 7754 F. (65) 6776 7114 E. INFO.SG@STEMCELL.COM

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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

1. 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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