

Maximize Your Pluripotential

With the TeSR™ Family of hPSC Culture Media

Maintenance of high quality pluripotent stem cells (PSCs) is critical to success in all applications of PSC research. The TeSR™ family of feeder-free maintenance media can help you minimize variation in your research. Each TeSR™ medium is based on published formulations¹⁻³ from the laboratory of James Thomson and offers unique features to fit your research needs.

Which TeSR™ Feeder-Free Medium is Right for You?

mTeSR™1: Most Published

Proven

- >1100 peer-reviewed publications (www.stemcell.com/mTeSR1publications).
- Published protocols for a wide variety of applications including bioreactor expansion and single-cell cloning.
- Published protocols for lineage-specific differentiation of PSCs that have been maintained in mTeSR™1.

Robust

- Used with thousands of human ES and iPS cell lines. PSCs maintained for more than 7 years and in >50 countries.
- Contains pre-screened BSA to stabilize medium, aid in lipid/nutrient transport, and protect cultures from cellular toxins and stresses.¹

TeSR™2: More Defined

Xeno-Free

- Modified formulation is similar to mTeSR™1, but with all xeno-free components, to produce a more defined medium.²
- Compatible with published mTeSR™1 protocols for a wide variety of applications.
- Contains recombinant human albumin to aid in lipid/nutrient transport and protect cultures from cellular toxins and stresses.

TeSR™-E8™: Simplified

Minimal formulation

- Contains only the 8 most essential components required for PSC maintenance.^{3,4}
- Cutting edge, xeno-free formulation.
- 433X less protein than mTeSR™1.

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The TeSR™ family of PSC media also includes optimized formulations for cryopreservation, reprogramming or use in differentiation assays. These products have the same base formulation, allowing researchers to establish a continuous TeSR™ media-based workflow for their PSC culture system.

Which TeSR™ Medium is Right for You?


TeSR™-E7™ & ReproTeSR™: Reprogramming



Optimized

- Feeder-free, xeno-free media for human iPS cell induction.
- Generates iPS cells with high quality colony morphology for easy identification and rapid subcloning.
- TeSR™-E7™ is based on the E8 formulation,³ with TGFβ removed for improved reprogramming efficiency of fibroblasts.
- ReproTeSR™ was optimized for reprogramming blood-derived cell types and seamlessly integrates with STEMCELL products for isolation and expansion of hematopoietic cells.
- ReproTeSR™ can also be used to reprogram other somatic cell types, and can be paired with ReproRNA™ for reprogramming fibroblasts.

TeSR™-E6 & TeSR™-E5: Screening and Differentiation



Neutral
base
medium

- Based on the E8 formulation,³ but do not contain bFGF or TGFβ.
- Lineage neutral formulation makes these media ideal for differentiation, screening assays, and other applications.
- With insulin removed in TeSR™-E5, this formulation facilitates differentiation to lineages in which insulin is a known inhibitor, such as cardiomyocyte.

mFreSR™ & FreSR™-S: Compatible Cryopreservation



Serum-Free

- Defined, serum-free medium optimized for cryopreservation of hPSCs cultured in TeSR™ maintenance media.
- hPSCs cryopreserved in mFreSR™ have thawing efficiencies higher than reported with conventional serum-containing media.
- FreSR™-S is animal component-free and optimized for cryopreservation of cells as single cells.

For a complete list of 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) Feeder-independent culture of human embryonic stem cells. *Nat Methods* 3(8): 637-646.
2. Ludwig TE et al. (2006) Derivation of human embryonic stem cells in defined conditions. *Nat Biotechnol* 24(2) 185-187.
3. Chen G et al. (2011) Chemically defined conditions for human iPS cell derivation and culture. *Nat Methods* 8(5) 424-429.
4. Beers J et al. (2012) Passaging and colony expansion of human pluripotent stem cells by enzyme-free dissociation in chemically defined culture conditions. *Nat Protocols* 7 2029-2040.

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