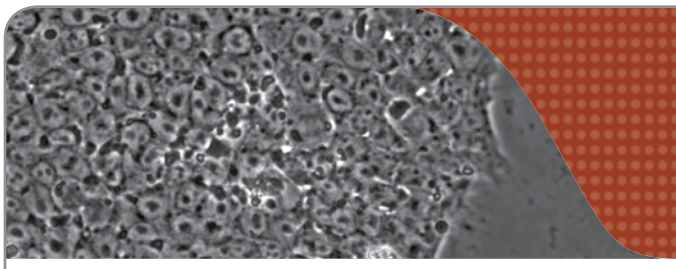

New Price

TeSR™2

Defined, Feeder-Free and Xeno-Free Human ES and iPS Cell Medium

TeSR™2, a Xeno-Free Version of mTeSR™1 for Maintenance of Human ES and iPS Cells

TeSR™2 is a xeno-free medium for long-term maintenance of human embryonic stem (ES) and induced pluripotent stem (iPS) cells. The TeSR™ family of feeder-free maintenance media includes mTeSR™1, TeSR™2 and TeSR™-E8™, which are based on published formulations from the laboratory of James Thomson.[1–3] Closely related to mTeSR™1, the most widely published feeder-free human pluripotent stem cell (hPSC) medium, TeSR™2 has a modified formulation, but with all xeno-free components, to produce a more defined medium.[2]

As a xeno-free alternative, TeSR™2 provides the same high-quality and robust system for basic research, stem cell banking, scale-up studies and pre-clinical applications. TeSR™2, can also be used with Vitronectin XF™ as a substrate to culture cells in a completely xeno-free system.

Comparable with mTeSR™1

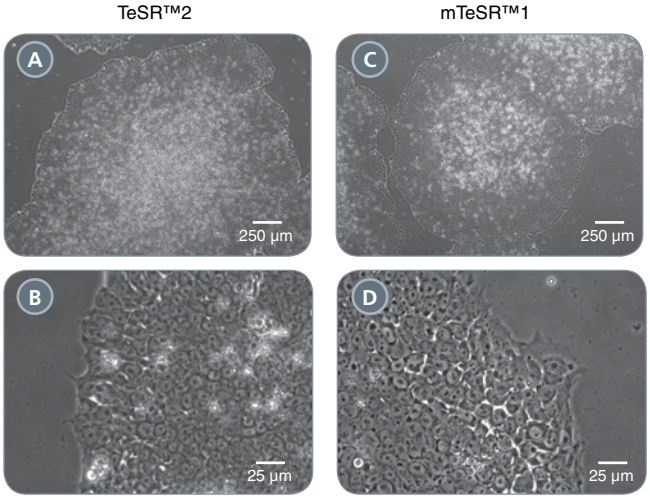

FIGURE 1. Morphology of hPSCs Maintained in TeSR™2 is Comparable to hPSCs Cultured in mTeSR™1

(A-B) Undifferentiated human ES (H9) cells cultured on Corning® Matrigel® matrix in TeSR™2 retain the prominent nucleoli and high nuclear to cytoplasm ratio characteristic of this cell type. Densely packed cells and multilayering are apparent when cells are ready to passage. **(C-D)** H9 cells cultured under the same conditions in mTeSR™1 exhibit comparable morphology.

Advantages of TeSR™2:

- **XENO-FREE.** TeSR™2 is a more defined version of mTeSR™1, free of xenogenic components.
- **COMPATIBLE.** Use with published mTeSR™1 protocols for a wide variety of applications
- **ROBUST.** Formulation contains recombinant human albumin to aid in lipid/nutrient transport and to protect cultures from cellular toxins and stresses.
- **INTEGRATED WORKFLOW.** Maintain newly generated human iPS cells (reprogrammed using TeSR™-E7™ or ReproTeSR™) and hPSCs prior to directed downstream differentiation with STEMdiff™ products.

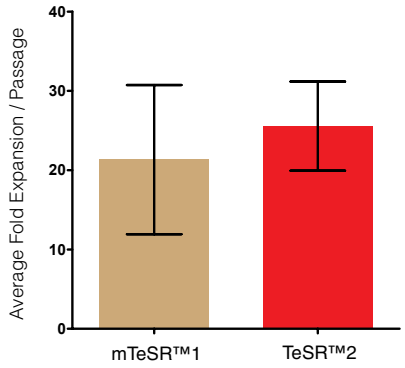

FIGURE 2. Fold and Cumulative Clump Expansion in TeSR™2

Graph shows the average fold expansion per passage ± SEM obtained for human ES and iPS cells cultured in mTeSR™1 (brown) or TeSR™2 (red) with Corning® Matrigel® over 10 passages. Expansion was determined by counting the cell aggregates obtained at harvest and dividing by the number of cell aggregates seeded.

Note: This data is representative of cultures passaged after 5-6 days in culture; lower expansion should be expected if using shorter culture times.

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FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

TeSR™2

Defined, Feeder-Free and Xeno-Free hES and hiPS Cell Medium

Standardized Feeder-Free Maintenance

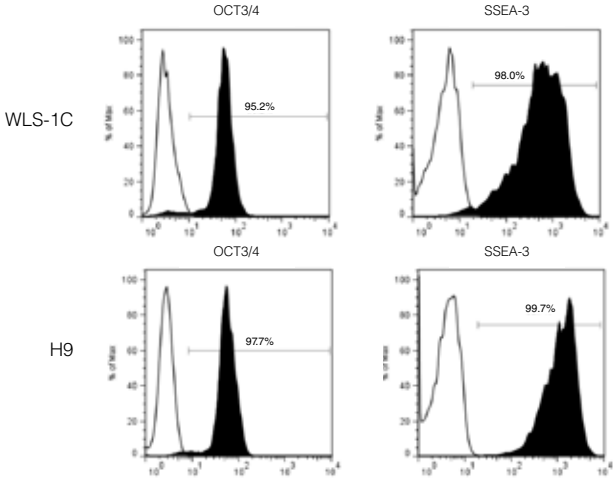

FIGURE 3. Human Pluripotent Stem Cells Cultured in TeSR™2 Retain Expression of Undifferentiated Cell Markers

Histogram analysis for H9 human ES and WLS-1C human iPS cells characterized using flow cytometry for undifferentiated cell markers (SSEA-3 and OCT3/4) after passaging in TeSR™2 for 21 passages (WLS-1C) and 18 passages (H9) respectively (filled histogram = sample, hollow histogram = secondary antibody only).

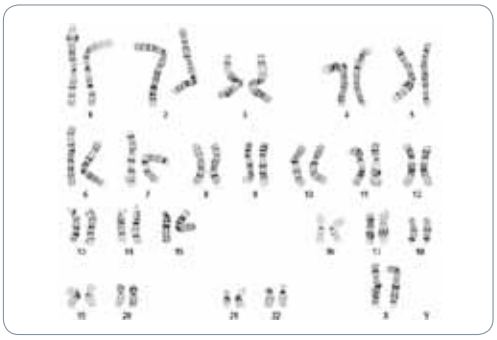

FIGURE 4. Human ES Cells Cultured Long-Term in TeSR™2 Retain Normal Karyotype

Chromosomal analysis of H9 hES cells cultured in TeSR™2 for 12 passages shows that normal karyotype is retained during passaging.

Product Information

PRODUCT	SIZE	CATALOG #
TeSR™2	1 Kit	05860
	10 Kits	05880

TeSR™2 Integrates Upstream or Downstream of Your Workflow

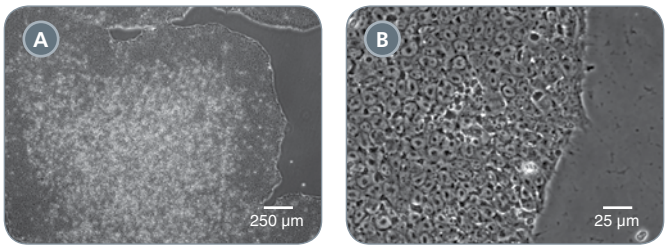

FIGURE 5. iPS Cell Colonies Generated with ReproTeSR™ Can Be Expanded in TeSR™2

(A-B) Representative images of iPS cell colonies generated using ReproTeSR™ and cultured in TeSR™2. Generated iPS cells retain the prominent nucleoli and high nuclear to cytoplasm ratio characteristic of this cell type. Densely packed cells and multilayering are apparent when cells are ready to passage.

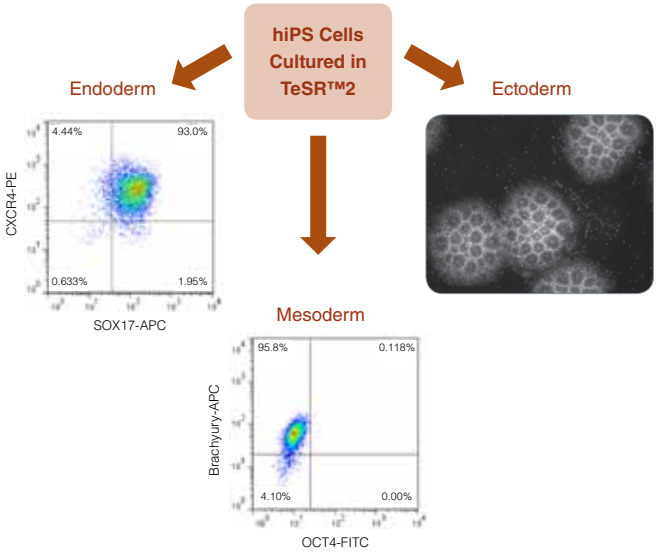

FIGURE 6. Directed Differentiation of TeSR™2-Maintained hiPS Cells

WLS-1C human iPS cells maintained in TeSR™2 were differentiated into all three germ layers. Endoderm specification was achieved using the STEMdiff™ Definitive Endoderm Kit. Mesoderm specification was demonstrated using a protocol modified from Lian X, et al.[4] Ectoderm specification was demonstrated using STEMdiff™ Neural Induction Medium to generate neural rosettes, a morphological hallmark of neural induction.

References

1. Ludwig TE, et al. Nat Methods 3(8): 637–46, 2006
2. Ludwig TE, et al. Nat Biotechnol 24(2): 185–7, 2006
3. Chen G, et al. Nat Methods 8(5): 424–9, 2011
4. Lian X, et al. PNAS 109(27): E1848-57, 2012