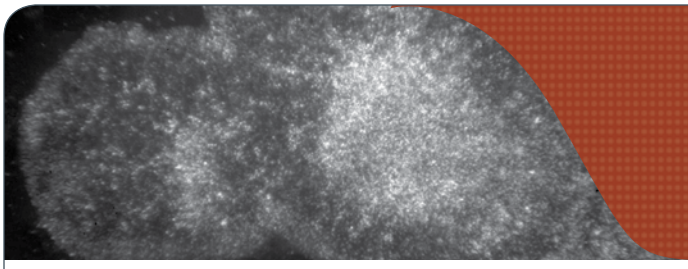

mTeSR™1

Defined, Feeder-Independent hESC & hiPSC Maintenance Medium

mTeSR™1 is the Most Widely Published Feeder-Independent hESC & hiPSC Maintenance Medium

mTeSR™1 is a standardized medium for the feeder-independent maintenance of hESCs and hiPSCs.[1] It is a complete, serum-free, defined formulation based on Ludwig et al.[2] and developed under license from the WiCell™ Research Institute. To date, mTeSR™1 has been used successfully to maintain over 50 independently derived hESC and hiPSC lines.

mTeSR™1 is designed to be used with BD Matrigel™ hESC-qualified Matrix (BD Catalog #354277) as a substrate. STEMCELL Technologies pre-qualifies each batch of BD Matrigel™ to ensure consistency, reproducibility and reliability in performance.

Developed at the:

WiCell® Research Institute

PRODUCT	QUANTITY	CATALOG #
mTeSR™1	500 mL	05850
	10 x 500 mL	05870
	25 x 500 mL	05875
	1L	05857

NEW!

VIDEO

See how leading researchers have achieved worldwide recognition with mTeSR™1

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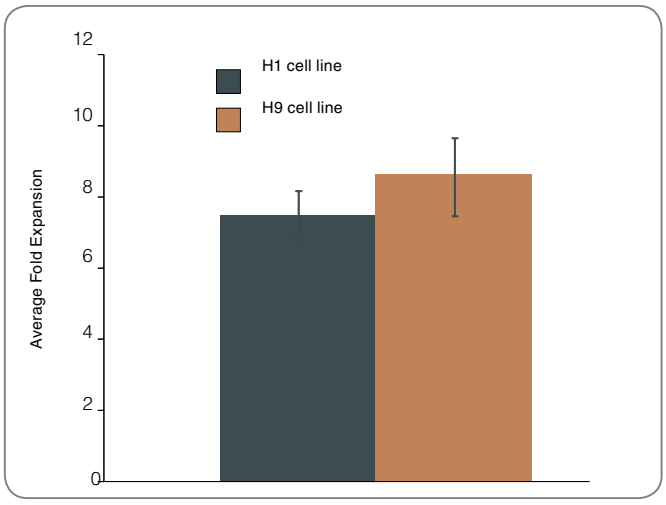
SCAN ME

Advantages of mTeSR™1

- Complete formulation that is defined and serum-free
- No feeder or conditioned media preparation
- Standardized culture method minimizes experimental variability

FIGURE 1. Consistent Expansion of hESCs & hiPSCs in mTeSR™1



H1 and H9 hESCs were expanded in mTeSR™1 for 19 and 18 passages respectively. Cultures show 7- to 10-fold expansion consistently across passages.

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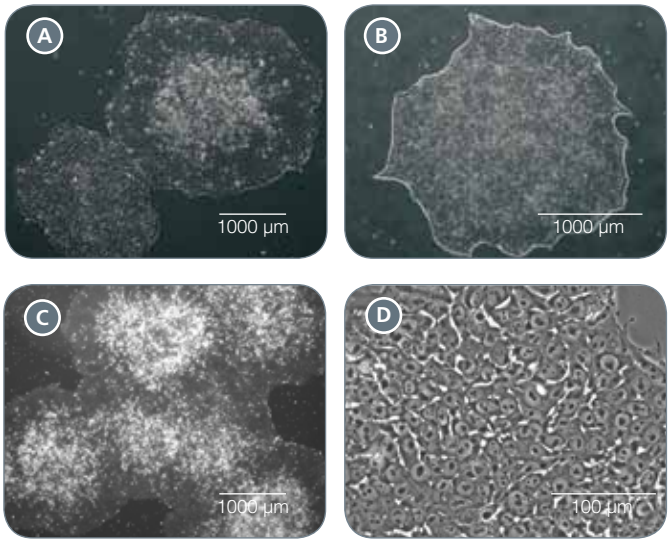
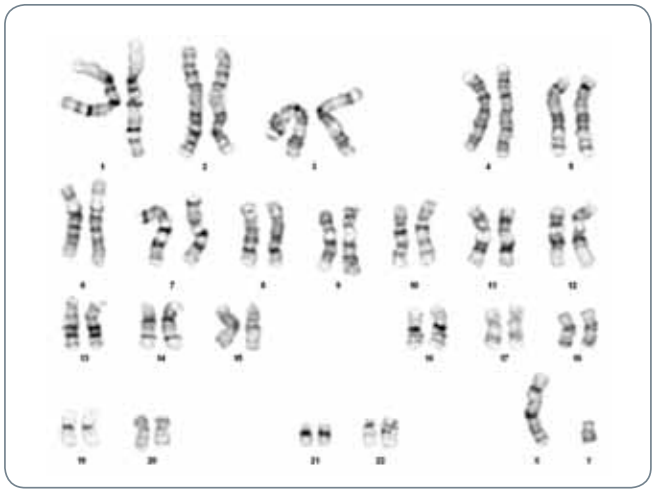
FIGURE 2. Morphology of hESCs & hiPSCs Cultured in mTeSR™1



Morphology of hESC and hiPSC lines cultured in mTeSR™1 varies slightly compared to feeder-containing or conditioned medium cultures - colonies have defined edges and high nucleus to cytoplasm ratio. Representative hiPSC lines **(A)** MSC-iPSC1 and **(B)** iPSC(IMR90)-3 and **(C and D)** H9 hESCs are pictured.

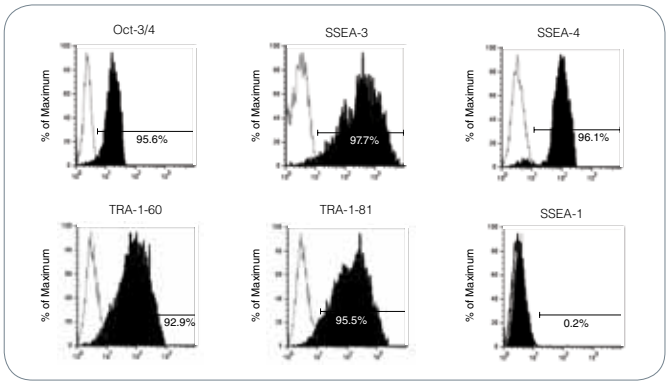
hiPSC photographs courtesy of M. O'Connor and C. Eaves, The Vancouver Human Embryonic Stem Cell Core Facility.

FIGURE 3. hESCs & hiPSCs Cultured Long-Term in mTeSR™1 Retain Normal Karyotype



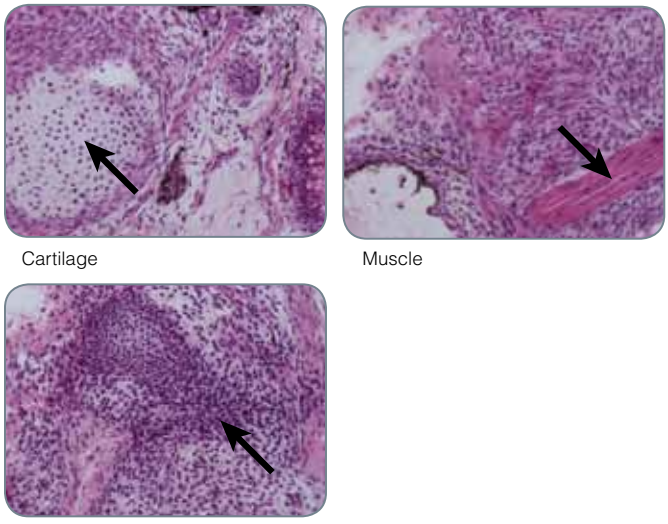
Chromosomal analysis of H1 hESCs cultured in mTeSR™1 for 48 passages shows that normal karyotype is retained during long-term passaging.

FIGURE 4. hESCs & hiPSCs Cultured in mTeSR™1 Retain Expression of Pluripotency Markers



Flow cytometric analysis of H9 hESCs maintained in mTeSR™1 for 17 passages.

FIGURE 5. hESCs & hiPSCs Cultured in mTeSR™1 are Pluripotent



Cartilage

Muscle

Neural

H9 hESCs were cultured for 6 passages in mTeSR™1 then injected subcutaneously into immunocompromised mice. The resulting teratoma contained cell types from all 3 germ layers. Representative tissue types are shown.

References

1. Yu J, Vodyanik MA, Smuga-Otto K, Antosiewicz-Bourget J, Frane JL Tian S, Nie J, Jonsdottir GA, Ruotti V, Stewart R, Slukvin II, Thomson JA. Induced pluripotent stem cell lines derived from human somatic cells. Science 318:1917-1920, 2007
2. Ludwig TE, Bergendahl V, Levenstein ME, Yu J, Probasco MD, Thomson JA. Feeder-independent culture of human embryonic stem cells. Nat Methods 3:637-646, 2006