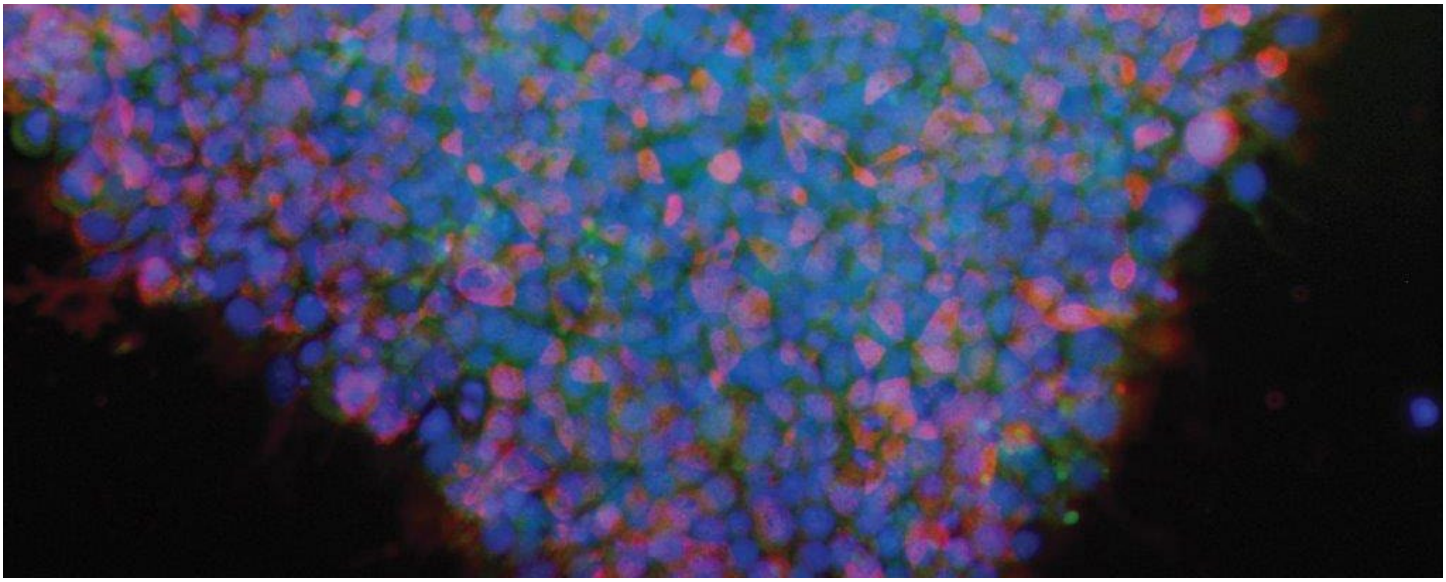
Corning® NutriStem® hPSC XF Medium

A superior xeno-free, serum-free culture medium for hES and hiPS cells



- Defined, xeno-free, serum-free
- Complete, ready-to-use
- Superior proliferation of undifferentiated hES and hiPS cells
- Stable pluripotency and genotype over long-term culture
- Extensively tested and widely referenced

Optimize Cell Growth and Expansion in a Xeno-free Environment

Corning NutriStem hPSC XF medium is a defined, xeno-free, serum-free medium designed to support the growth and expansion of human induced pluripotent stem (hiPS) and human embryonic stem (hES) cells in a feeder-free environment.

Corning NutriStem hPSC XF medium lets you culture human pluripotent stem cells without the need for high levels of basic fibroblast growth factor (bFGF), other stimulatory growth factors, or cytokines. The low-protein formulation contains only the most essential components required for maintenance of hES and hiPS cells, providing a simplified medium that maintains cells' full differentiation potential. The defined, xeno-free formulation of NutriStem hPSC XF medium provides consistent media performance as well as increased reproducibility in hPSC long-term cultures.

Normal Cell Morphology and Functional Assessment of Pluripotency

The formation of compact colonies of cells with a high nucleus-to-cytoplasm ratio, prominent nucleoli, and distinct colony borders are characteristic morphology traits

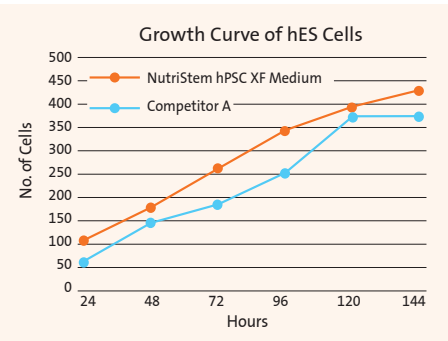


Figure 1. Corning NutriStem hPSC XF medium enables highly efficient proliferation of undifferentiated hES and hiPS cells. Proliferation of H1 hES cells cultured in Corning Matrigel® matrix-coated 96-well plates in Corning NutriStem hPSC XF medium and the leading medium for feeder-free culture. Medium was changed and proliferation was assessed every 24 hours in culture.

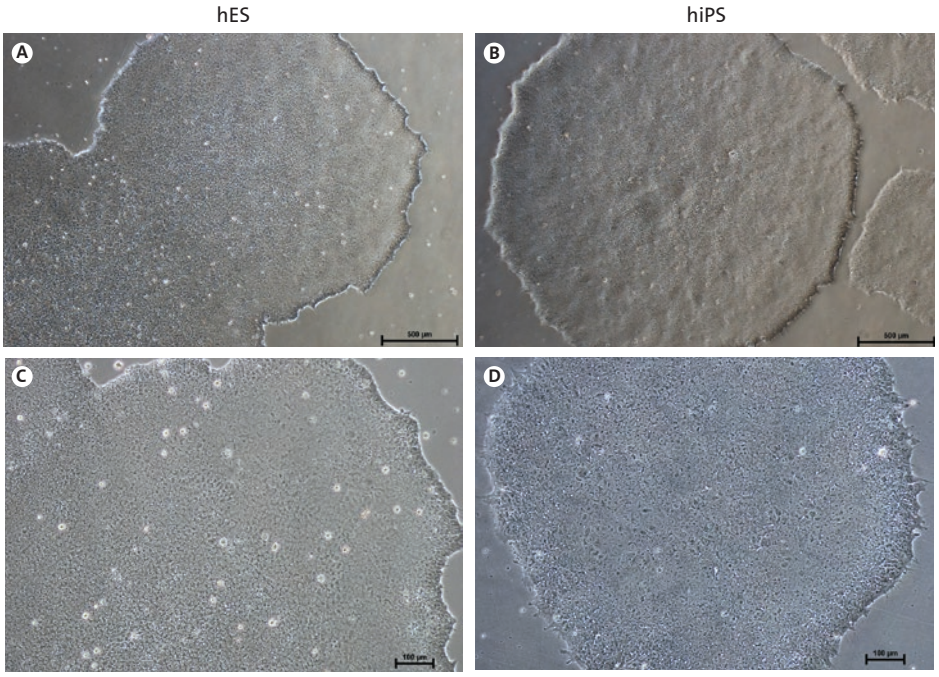


Figure 2. Normal colony morphology. H1 hES cells (panels A, B) and ACS-1014 hiPS cells (panels C, D) cultured in Corning® NutriStem® hPSC XF medium on Corning Matrigel® matrix-coated plates display colony morphologies typical of normal feeder-free hES and hiPS cell cultures, including a uniform colony of tightly compacted cells and distinct colony edges.

of healthy undifferentiated hES and hiPS cells (Figure 2). Human pluripotent stem cells hold the potential to differentiate into cell types of all three germ layers. This differentiation potential is assessed by the spontaneous differentiation within embryoid bodies cultured *in vitro* (Figure 3) and teratomas formed *in vivo* (Figure 4).

Ordering Information

Corning NutriStem hPSC XF Medium

Fisher Scientific Cat. No.	Corning Cat. No.	Description	Unit Size (mL)	Qty/Pk
MT40051001A	40-05-100-1A	NutriStem hPSC XF medium, [+] HSA	500	1
MT40051001B	40-05-100-1B	NutriStem hPSC XF medium, [+] HSA	100	1

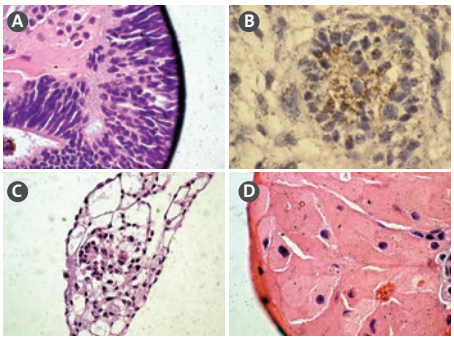


Figure 3. Embryoid body formation. Embryoid bodies (EBs) were generated from H9.2 hES cells cultured for 16 passages in Corning NutriStem hPSC XF Medium on Corning Matrigel matrix to evaluate pluripotency. Pluripotent H9.2 cells suspended in serum-supplemented medium spontaneously formed EBs containing cells of embryonic germ layers. The following cell types were identified by examination of the histological sections of 14-day-old EBs stained with H&E: (A) neural rosette (ectoderm), (B) neural rosette stained with Tubulin, (C) primitive blood vessels (mesoderm), and (D) megakaryocytes (mesoderm).

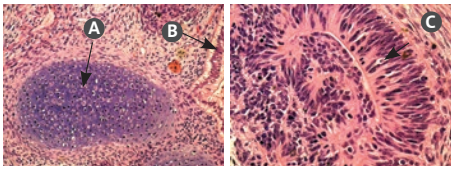


Figure 4. Teratoma formation. H9.2 hES cells were cultured for 11 passages in Corning NutriStem hPSC XF medium using a human foreskin fibroblast (HFF) feeder layer. The hES cells were subsequently injected into the hind leg muscle of SCID-beige mice for *in vitro* evaluation of pluripotency. The following tissues from all three germ layers were identified in H&E-stained histological sections of the teratoma 12 weeks post-injection: (A) cartilage (mesoderm), (B) epithelium (endoderm), and (C) neural rosette (ectoderm).

For more specific information on claims, visit the Certificates page at **www.corning.com/lifesciences**.

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