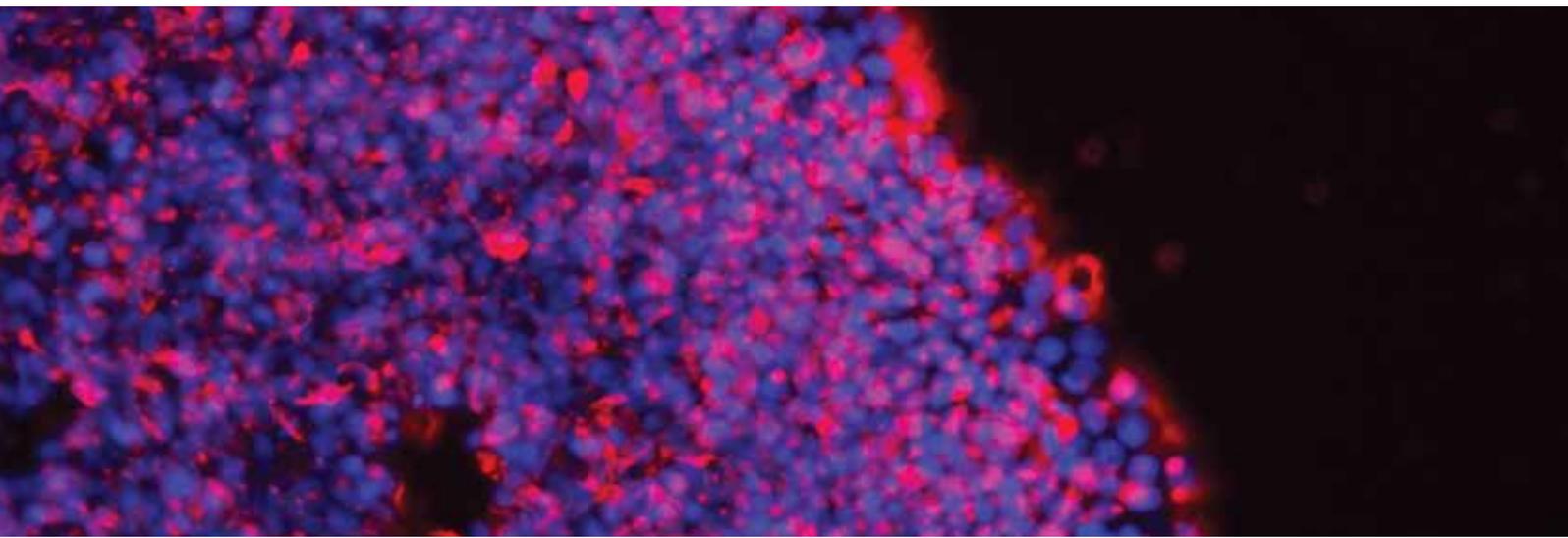




# NutriStem® V9 XF

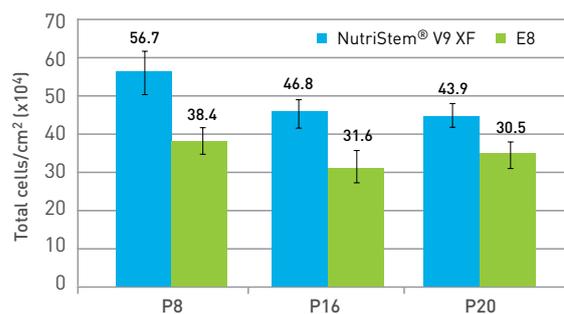
A superior, defined, xeno-free, serum-free culture medium for hPSC cells on vitronectin



- Superior proliferation rates in long-term culture on recombinant vitronectin
- Precoating-free protocol
- ROCK inhibitor-free protocol for seeding, passaging and thawing.
- Produced under cGMP
- Maintains high pluripotency at high passages
- Weekend-free feeding
- Cytokine-free basal medium, applicable for EBs formation, reprogramming, and differentiation

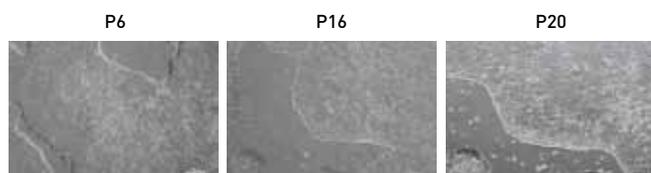
NutriStem® V9 XF is a defined, xeno-free, serum-free medium designed to support the growth and expansion of human pluripotent stem cells (hPSCs), on recombinant vitronectin matrice and enzyme-free passaging as small aggregates. NutriStem® V9 XF medium contains only the essential components required for long-term maintenance of hPSCs. This medium shows superior proliferation rates during long-term cultures, while maintaining the pluripotency of the cells. NutriStem® V9 XF medium allows the culture of hPSCs in vitronectin pre-coated culture, as well as the direct addition of vitronectin to the medium (no need for precoating).

## NutriStem® V9 XF medium shows superior proliferation rates in long-term culture



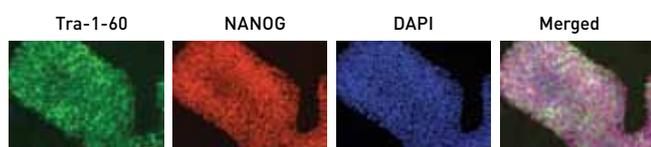
**Figure 1:** Nucleocounts performed on equal volume of cell suspension during long-term expansion of H1 cultured in NutriStem® V9 XF medium and competitor medium using 0.5µg/cm<sup>2</sup> Vitronectin ACF.

## Normal cell morphology and assessment of pluripotency



**Figure 2:** Phase contrast images (x100) of H1 hESC culture maintained in NutriStem® ACF medium, using 0.5µg/cm<sup>2</sup> Vitronectin ACF. Representative images from culture at P6, P16 and P20.

**Undifferentiated colonies maintained typical hPSC colony morphology during long-term culture of H1 hPSC.**



**Figure 3:** Immunofluorescence analysis of human pluripotent markers of H1 hPSC expanded in NutriStem® V9 XF medium using Vitronectin ACF. Cells from P8 were fixed and stained for the classic pluripotent surface markers: TRA 1-60 (green) and nuclear conjugated markers: NANOG (red) both counterstained with DAPI (blue). Scale bar 200µm.

**Cells cultured in NutriStem® V9 XF medium on vitronectin express high levels of pluripotent markers.**

## Ordering Information

Cat. #	Product	Qty
05-105-1A	NutriStem® V9 XF basal medium	500 mL
05-106-1F	NutriStem® V9 XF supplement mix	1 mL
05-754-0002	Vitronectin ACF	200 µg
01-862-1B	EDTA Solution 0.5M	100 mL
05-713-1A	NutriStem™ D10 Cryopreservation Medium	500 mL
05-713-1B	NutriStem™ D10 Cryopreservation Medium	100 mL
05-713-1C	NutriStem™ D10 Cryopreservation Medium	20 mL
05-713-1D	NutriStem™ D10 Cryopreservation Medium	10 mL
05-713-1E	NutriStem™ D10 Cryopreservation Medium	50 mL

## How to Order

**Biological Industries** | T. 972-4-996-0595 | F. 972-4-996-8896 | [info@bioind.com](mailto:info@bioind.com)

**Biological Industries USA** | T. 860.316.2702 | F. 860.269.0596 | [orders@bioindusa.com](mailto:orders@bioindusa.com)

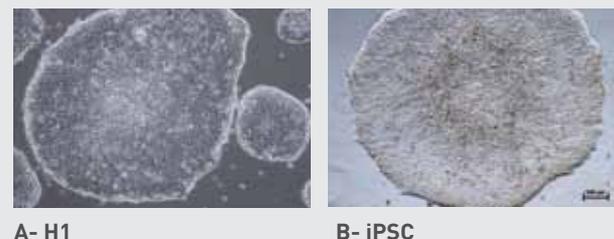
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## Precoating-Free Procedure

The use of a recombinant protein matrix, such as vitronectin, markedly improves stable maintenance of hPSCs. However, its use is time-consuming and laborious. Therefore, a user-friendly protocol has been developed to eliminate the precoating procedure.

While seeding, Vitronectin ACF is added directly into NutriStem® V9 XF medium, making pre-coating unnecessary.



**Figure 4:** H1 cultured in NutriStem® V9 XF medium for 6 sequential passages using a pre-coating free protocol. Vitronectin ACF was added directly to NutriStem® V9 XF medium before cell seeding. Representative images of H1 colony (A) iPSC ACS 1019 (ATCC) (B) colony morphology (x100). **The precoating-free protocol supports classic colony morphology while maintaining high levels of pluripotent markers expression.**

## Immunofluorescence staining



**Figure 5:** Immunofluorescence analysis of human pluripotent markers of H1 hESC expanded in NutriStem® V9 XF medium using a precoating-free protocol. Cells from P8 were fixed and stained for the classic pluripotent surface markers: SSEA4 (red), TRA 1-60 (green) and nuclear conjugated markers: OCT-4 (green). Scale bar 200µm.

**Cells cultured in NutriStem® V9 XF medium using the precoating-free protocol express high levels of pluripotent markers.**



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