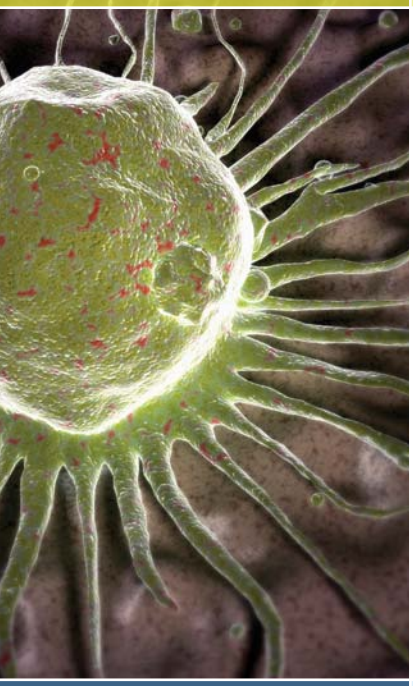
Vita means life



Thermo Scientific Nunclon Vita Surface

Animal component-free surface for growth of stem cells and other fastidious cells

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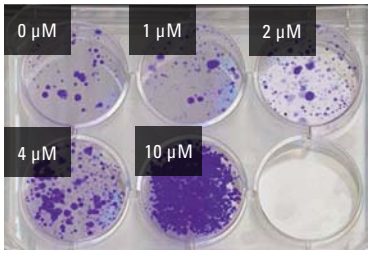
Thermo Scientific Nunclon Vita Surface

Nunclon™ Vita™ Surface supports attachment, colony formation and growth of human ESC and human IPS cells in the absence of feeder cells and matrix coatings. In media supplemented with ROCK inhibitor, human ESC can be cultured on the Nunclon Vita Surface for at least 10 passages without loss of pluripotency. Human ESC has successfully been expanded for more than 10 passages without changes to the karyotype.

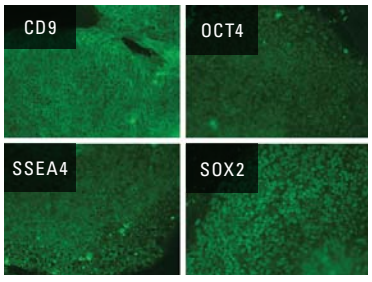
Human Embryonic Stem Cells (human ESC)

- No matrix coating or feeder cells necessary
- Expand for more than 10 passages in conditioned media with a ROCK inhibitor while maintaining pluripotency
- Passage with enzymes or by mechanical selection
- Alternatively, passage by withdrawing ROCK inhibitor followed bya short incubation and gentle pipetting



Dose-response effect of ROCK inhibitor Y-27632 on the attachment of human ESC to Nunclon Vita Surface. Y-27632 was added to the cultures at the shown concentration (0, 1, 2, 4 or 10 µM) at cell seeding. The cells were then maintained from day two onward in media containing 10 µM Y-27632. Media was changed daily until day five, and cells were stained with crystal violet.

Photomicrograph of human ESC cultured on Nunclon Vita Surface demonstrating compact cells and a distinct colony border.



Expression of pluripotency markers in human ESC as determined by immuno-fluorescence staining after 11 passages on Nunclon Vita Surface.

Animal component-free surface for growth of stem cells and other fastidious cells

Thermo Scientific Nunclon Vita Cell Culture Surface is a unique energy-treated polystyrene that enables growth of most cell lines directly on the surface without using matrix coatings or feeder cells. Eliminating the need for coatings and feeder cells removes variability, requires less work, and allows for the treated surface to be adaptable to scalable cell expansion.

Using Nunclon Vita Surface enables you to grow cells directly on the polystyrene surface.

The surface works in synergy with a ROCK inhibitor for expansion of human pluripotent stem cells and HEK cells.

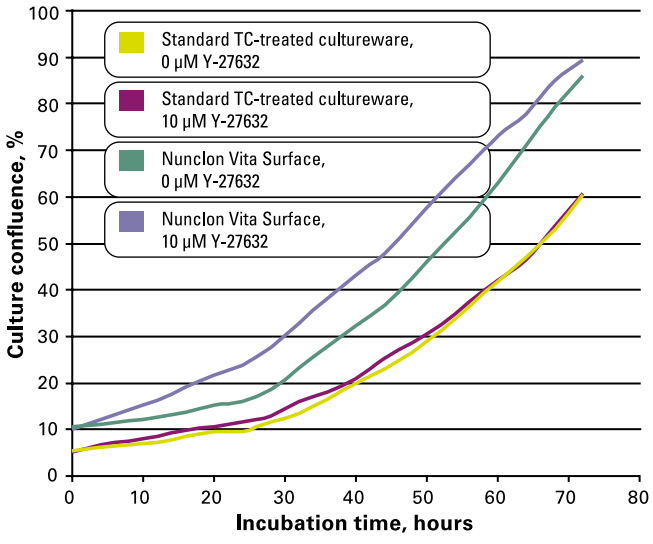
Thermo Scientific Nunc MultiDish 6 with Nunclon Vita

Cat. No	No. of wells	Surface	Bottom Shape	Sterile	Suggested working volume, ml/well	Culture Area, cm^2/well	External dimension, mm	Units per pack/ casse
145380	6	Nunclon Vita	Flat	+	3	9.6	128 x 86	1/4

Human Embryonic Kidney Cells (HEK)

- No coating necessary
- Improved attachment and growth in comparison to standard tissue-culture (TC) treated cultureware
- Enhanced growth in media with ROCK inhibitor

The Nunclon Vita Surface supports HEK293 attachment and growth better than standard TC treated surface. Addition of ROCK inhibitor Y-27632 to the media enhances HEK293 attachment and growth on the Nunclon Vita Surface.



Attachment and growth of HEK293 on Nunclon Vita Surface and the standard tissue-cultured (TC) treated surface, in the presence or absence of ROCK inhibitor Y-27632. The culture confluence was measured continuously for 72 hours.

Human Induced Pluripotent Stem Cells (human IPS)

- No matrix coating or feeder cells necessary
- Expand for more than three passages in conditioned media with a ROCK inhibitor while maintaining pluripotency
- More studies are needed to discover the full performance with human IPS

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For research use only

Important information about patents:
Attachment, cultivation and detachment of cells using methods described herein are covered by patent applications WO 2009/105570 and US 12/388,930. A license to use these methods with Nunclon Vita Surface cultureware solely in connection with research is granted with the purchase of Nunclon Vita cultureware.

Inquiries for a license to use these methods for commercial purposes, except for those purposes relating to amelioration of diabetes mellitus, should be sent to: Thermo Fisher Scientific, 81 Wyman Street, Waltham, MA 02451, Attn: Legal Dept.

Inquiries for a license to use these methods directly or indirectly in the amelioration of diabetes mellitus should be sent to: Att. Vice President of BetaLogics Centocor Research & Development, Inc, 145 King of Prussia Road, Radnor, PA 19087, USA.

Particular types of cells, as well as methods for manipulating cells, may be covered by one or more patents held by others. Use of Nunclon Vita cultureware is recommended only for applications which do not violate proprietary rights of others or for which the user has a license or other permission under such proprietary rights.

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