Ncardia

Fact sheet

Ncyte® Endothelial Cells

Human iPSC-derived vascular endothelial cells

- Minimal biological variability
- Functional and physiologically relevant
- Highly suitable for *in vitro* modeling and screening

Description

Endothelial cells are involved in multiple processes including blood flow, vascular permeability and angiogenesis. Ncyte® Endothelial Cells are fully functional and can be used to develop custom assays to predict drug-induced effects on human endothelial barrier permeability or angiogenesis.

Product specifications

Cell type	Ncyte Endothelial Cells
Identity markers	≥ 70% CD31, ≥ 70% CD144, ≤ 10% PDGFRB and ≤ 10% NG2 after thawing and at day 3 of culture according to the user guide
Size (viable cells / vial)	≥ 1M viable cells after thawing according to user guide
Quality Control	Cell count, Viability, Identity, Specific-pathogen-free
Format	Cryopreserved cells
Donor	Female
Reprogramming method	Non-viral
Shipping conditions	Dry shipper, -180°C to -135°C
Storage conditions	Vapour phase of liquid nitrogen

Identity

Ncyte® Endothelial Cells display characteristic endothelial cell morphology in culture and express key endothelial markers. Figure 1A shows a representative FACS analysis of one batch of hiPSC-derived Ncyte® Endothelial Cells showing double expression of CD144 and CD31. Figure 1B displays a phase contrast image showing endothelial morphology in culture.

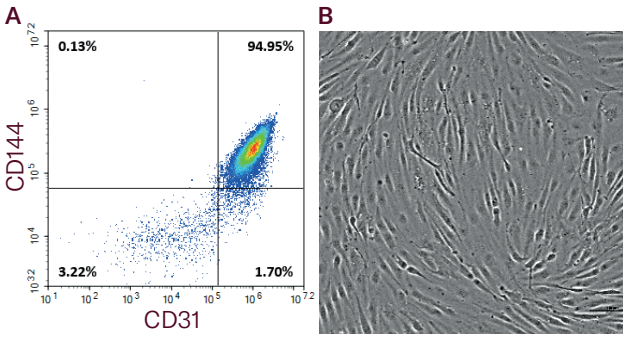

Figure 1. A) Representative FACS analysis of one batch of hiPSC-derived vascular endothelial cells showing double expression of CD144 and CD31. B) Phase contrast image showing the endothelial morphology of our cells in culture.

Applications

Ncyte® Endothelial Cells are the ideal tool to provide relevant predictions on your drug's effect on endothelial cell function. They can be utilized over the entire drug discovery process, from the large screening campaigns for hit identification to critical decision-making in hit-2-lead or lead optimization.

Study drug-induced effect on endothelial barrier permeability or angiogenesis

Ncyte® Endothelial Cells are fully functional and physiologically relevant. These cells can form endothelial barriers or 3D capillaries *in vitro* enabling the study of drug-induced effects on endothelial barrier permeability and angiogenesis (Figure 2A).

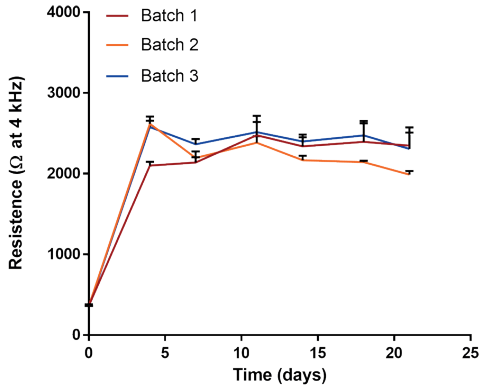

Figure 2A. Barrier resistance over time. Measured at 4 kHz using ECISTM (Applied Biophysics).

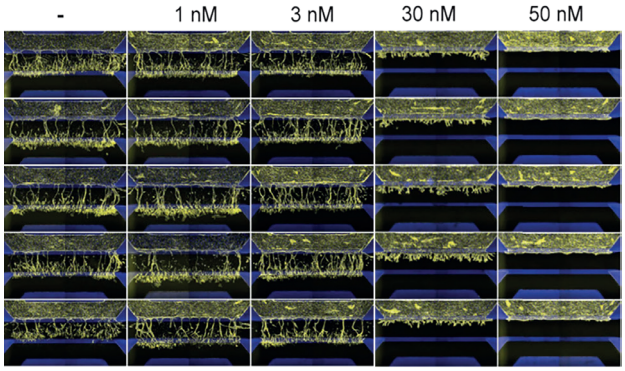

Figure 2B. Dose dependent inhibition of angiogenic sprouting by the angiogenesis inhibitor Sunitinib at different concentrations. Yellow = F-actin, blue = nucleus.

Disease modeling and screening

Ncyte® Endothelial Cells are highly suitable for disease modeling and screening. Our scientific team has extensive experience on multiple functional assays with endothelial cells. For example, using the sprouting assay, our team can help you characterize the effects of a compound library on angiogenesis (Figure 2B).

To further advance your drug discovery programs, you can rely on our customized services, from disease modeling to assay development for *in vitro* pharmacology or toxicology screenings, to increase the confidence in your selected candidates and successfully bring your project to the next level.

Know now, to win then

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Get in touch!

Unlock the potential of your research with Ncardia – Learn more about the benefits of Ncardia's cell models and iPSC-based services.

E-mail: support@ncardia.com
Website: **www.ncardia.com**