For Research use in Drug Response and Regenerative Medicine

NEW!

CellArray™

CellArray-Heart™

New line-up culturing device for cardiomyocytes, skeletal muscle cells and fibroblasts

96 Well-Plate

For research of drug response

Cardiotoxicity can be evaluated with mature-oriented iPS cell-derived cardiomyocytes.

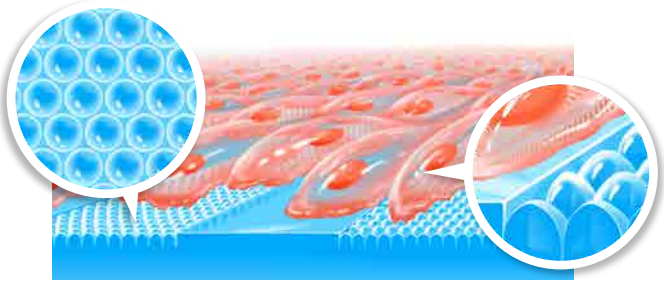
35mm Dish

For regenerative medicine research

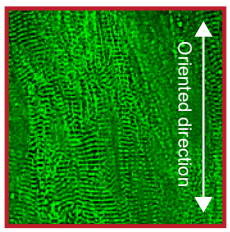
Mature-oriented iPS cell-derived cardiomyocytes sheets can be produced.*

CellArray-Heart™ induces rapid cell orientation

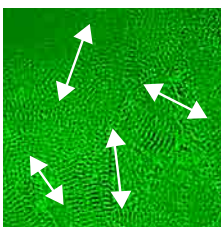
CellArray-Heart™ can induce orientation of iPS cell-derived cardiomyocytes within 7 days after seeding. In addition, the orietation maturates morphology and physiological activity of cells, hence can be used for drug safety testing and regenerative medicine research.



Unidirectionally oriented cardiomyocyte sheet with sarcomere structure



CellArray-Heart™



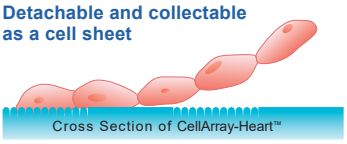
General flat substrate

Within 7 days, the oriented human iPS cell-derived cardiomyocytes show motility in single direction with continuous pulse, and develop regular sarcomere structures. On the contrary, the cardiomyocytes cultured on a general flat substrate show random directionality (see microscope observation).

Example of culture experiment (human iPS cell-derived cardiomyocytes)
Immunostaining: alpha-actinin (green)

* For regenerative medicine use

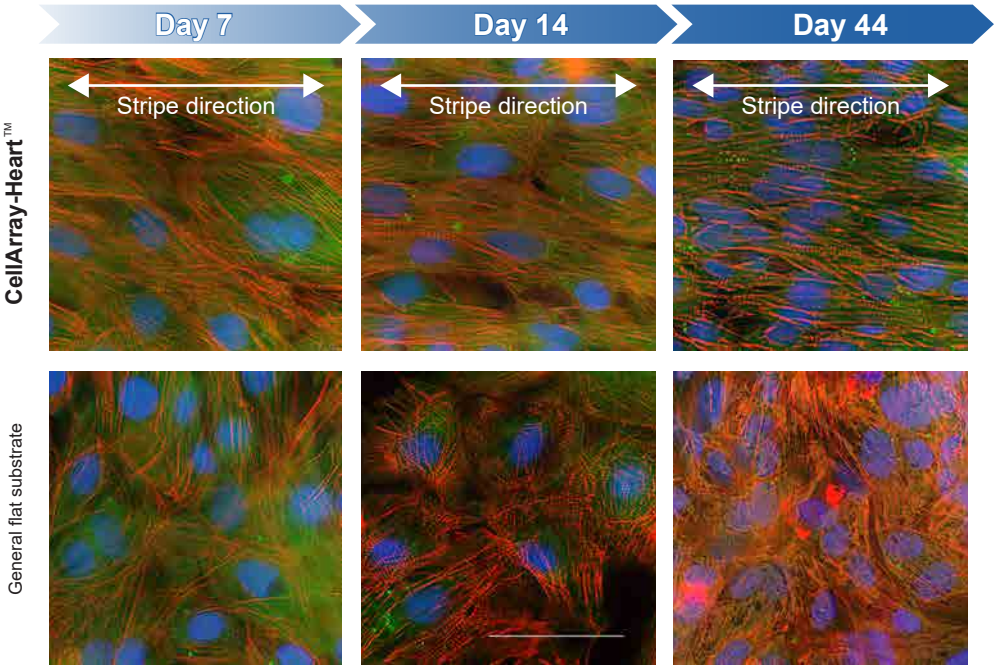
By coating the surface with material that enables cell detachment, the oriented cell sheet can be removed from the substrate. If it is necessary to use such a modified CellArray-Heart™, please contact us.



Orientation of human iPS cell-derived cardiomyocytes within 7 days

Oriented culture in stripe direction

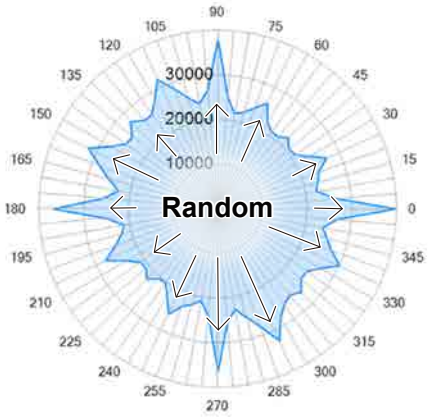
The iPS cell-derived cardiomyocytes cultured on CellArray-Heart™ showed orientation in the stripe direction by 7th day, and the orientation was maintained at least until 44th day.



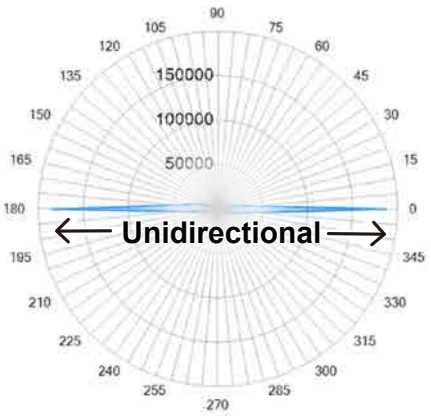
Example of culture experiment
(human iPS cell-derived cardiomyocytes)

Unidirectional pulsation activates motor function

Motility analysis of cardiomyocytes cultured on CellArray-Heart™ exhibited significant unidirectionality in 180° and 0°.



General flat substrate



CellArray-Heart™

Example of culture experiment
mesured by Motion Vector (Sony SI8000)
(human iPS cell-derived cardiomyocytes)

Joint research with Juntendo University

For sale in Japan only. Please contact us for overseas sales.

(excluding tax)

Model No.	Product	Number of items	Regular price (Set price)
HT-35D-ST-03	CellArray-Heart™ 35mm dish	3 pcs.	¥ 15,000
HT-35D-ST-10		10 pcs.	¥ 47,500
HT-35D-ST-20		20 pcs.	¥ 95,000
HT-96P-CC-02	CellArray-Heart™ 96 Well Plate	2 pcs.	¥ 100,000
HT-96P-CC-10		10 pcs.	¥ 450,000
HT-96P-CC-20		20 pcs.	¥ 900,000

- Orientation has been confirmed in cardiomyocytes, myoblasts, and fibroblasts, but it may not be suitable for orientation depending on the cell type and culture conditions.
- This product is sold for research and development purposes only. Please note that we cannot guarantee the safety of the product when used for purposes other than research and development.
- Optical interference coloring (rainbow patterns) is observed on the culture surface of the substrate, but this is structural coloring caused by the nanostructure that does not affect cell culture and microscopic observation. Under the microscope, the stripe pattern at the bottom structure can be observed.
-The data adove does not guarantee any experimental results.

Beyond the Boundaries

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