



NIPPON Genetics EUROPE

Cell Biology

Serum-free Freezing Media



Bambanker™

Patented formula for higher cell survival rates

Bambanker™ hRM

No animal components

Bambanker™ DMSO-free

Very high survival rates without DMSO

Bambanker™ Direct

Quickest way to freeze cells - without centrifugation

*"We use Bambanker HRM in our lab and we have been very happy with it. We have human induced pluripotent stem cells that we work with which have come from "diseased" individuals. These cells don't come out of freeze thaw very well. We have only been able to get them to survive by using Bambanker. **It has been essential for us!**"*

Scientist at the Van Andel Instituts in Grand Rapids, USA



Bambanker™ Media

Serum-free



Universal & serum-free freezing media

Bambanker™ freezing media have a patented formulation, a very easy procedure and the best cell recovery rates. They are an universal freezing media compatible with all known cell lines.

- ✔ Bambanker™-Media are serum-free
- ✔ Bambanker™-Media are very easy to use
- ✔ Bambanker™-Media do not need stepwise freezing
- ✔ Bambanker™-Media is ultra-pure: Manufactured according the japanese pharmacopeia

Using the original Bambanker™ Medium as a template, new formulations were developed for special applications: 1) **Bambanker™ hRM** does not use any animal component anymore 2) a very fast freezing method, with minimal steps, using **Bambanker™ Direct**; and 3) a newly developed **DMSO-free** version of our original Bambanker for extremely sensitive cells.

Bambanker™

The Original - user friendly, quick, , schnell, well-proven

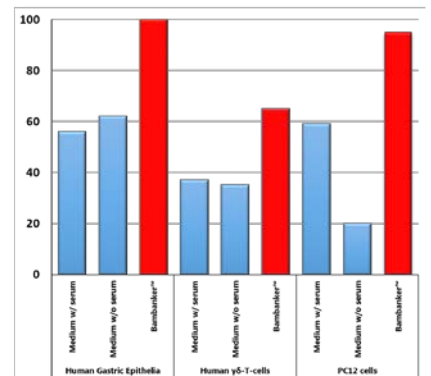
The innovative cell freezing medium Bambanker™ is the market-leader in Japan and has been cited in many peer-reviewed publications, in which very sensitive cell lines have been used*. Bambanker™ has many advantages:

- ✔ Highest survival and better cell proliferation rates
- ✔ Bambanker™ is serum-free
- ✔ Ready-to-use - Bambanker™ does not have to be prepared
- ✔ Very long shelf-life (18+ months) at 2 - 8 °C

*Visit www.nippongenetics.eu for an overview of publications.

- BB01 120 ml Bambanker™
- BB02 5 x 20 ml Bambanker™
- BB03 20 ml Bambanker™

Comparison



Higher survival rate when using Bambanker™. The chemical composition of Bambanker is more gentle to the cells when freezing them down. This increases the cellular survival rate.



Bambanker™ hRM

Xeno-free



No animal components

Bambanker™ hRM is a freezing media that has all the advantages of the original formulation. Additionally, Bambanker™ hRM contains **humane serum albumin and no animal components** and is therefore ideal for primate iPS or ES cells:

- ✔ Highest survival rate
- ✔ Bambanker™ hRM is serum-free and produced according to a drug master file!
- ✔ Xeno-free - no animal component
- ✔ Ready-to-use - Bambanker™ hRM does not have to be prepared
- ✔ Very long shelf-life (18+ months) at 2 - 8 °C

„We use Bambanker HRM in our lab and we have been very happy with it. We have human induced pluripotent stem cells that we work with which have come from „diseased“ individuals. These cells don't come out of freeze thaw very well. We have only been able to get them to survive by using Bambanker.

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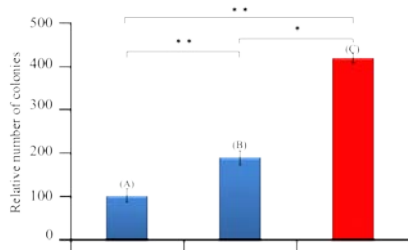
BBH01 20 ml Bambanker™ hRM

BBH02 10 ml Bambanker™ hRM

Customer Observation: Vitrification vs. Bambanker™ hRM

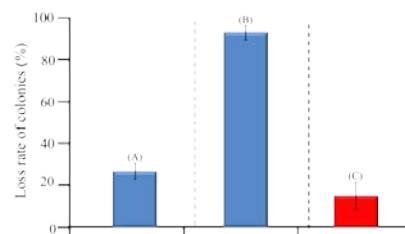
The cryopreservation of primate ES and iPS cells is extremely challenging when compared to other cells. The golden standard method was the so called vitrification method. This technique is very difficult to perform and frozen cells could not be transported using dry ice, which was an important disadvantage.

Scientific analysis has shown that Bambanker™ hRM can replace the complex vitrification method, with its much simpler freezing method, enabling the transport on dry ice and achieving a higher survival rate:



Higher survival rate by using Bambanker™ hRM. Primate ES-cells were frozen with Medium containing 10 % DMSO (A), per vitrification (B) or with Bambanker™ hRM (C). The bars represent the survival rate after 4 days of cultivation after thawing the cells.

n=3, Mean ± SEM, *P<0.05, **P<0.01



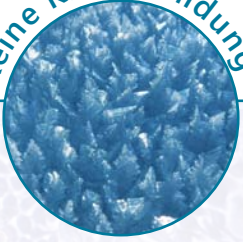
Death rate after transportation on dry ice. Primate ES-cells were frozen with Medium containing 10 % DMSO (A), per vitrification (B) or with Bambanker™ hRM (C). Cells were stored for 24 hours on dry ice. The bars represent the death rate of the cells after thawing after 4 days of cultivation..

n=3, Mean ± SEM,



Bambanker™ DMSO-Free

Keine Kristallbildung



No ice crystals even without DMSO

The formation of ice crystals can lead to cellular death. Hence, DMSO is used in most cryopreservation media uses. Nevertheless, DMSO can be cytotoxic.

Bambanker™ DMSO-free has a special formulation, which does not need DMSO anymore.

- ✔ Highest survival rate
- ✔ Bambanker™-DMSO free is serum-free
- ✔ Ready-to-use - Bambanker™ DMSO-free does not have to be prepared
- ✔ Very long shelf-life (18+ months) at 2 - 8 °C

BBF01 20 ml Bambanker™ DMSO-free

BBF02 10 ml Bambanker™ DMSO-free

Bambanker™ Direct

Fastest freezing - even at high-throughput

Bambanker™ Direct is the quickest method to freeze down cells. You can add it directly to the cells without having to centrifuge. The cells can then be stored directly at -80 °C.

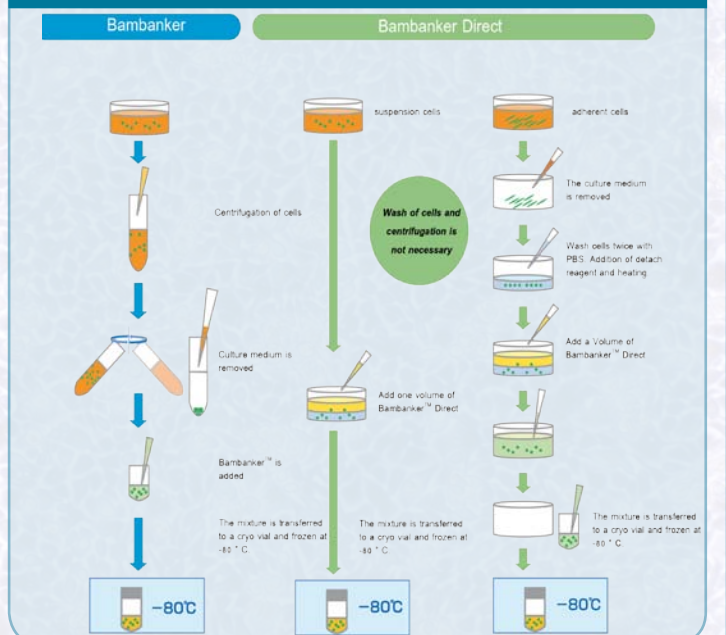
- ✔ No centrifugation necessary
- ✔ Ideal for high-throughput
- ✔ Over 20 different cell types*
- ✔ Bambanker™-Direct is serum-free

Visit www.nippongenetics.eu for an overview of cell lines

BBD01 20 ml Bambanker™ Direct

BBD02 10 ml Bambanker™ Direct

Very easy protocol



Blue/Green LED Flashlight

Great Signal - No UV-Light

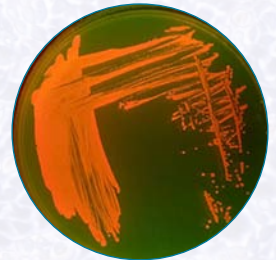
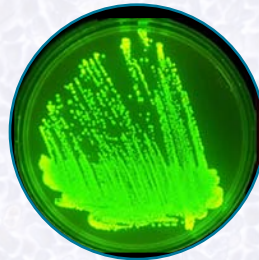


The FastGene® blue/green LED flashlight excites fluorescent proteins without causing cellular stressed present when exposing to UV-light.

- ✔ Detection of transfection of fluorescent proteins
- ✔ Safe light - no damage to the cells
- ✔ Illuminate through tissue

Detect fluorescent proteins by **BC^{BLUE GREEN}LED**

The flash light is able to excite the popular fluorescent proteins such as GFP, eGFP, RFP and YFP. The excitation light is not in the UV-range. Hence, your cells stay happy when the fluorescent protein is detected. The light is strong enough to penetrate tissue.



FastGene® Cryo tubes

Wide opening for easy tissue storage

Three different volumes (0.5 ml, 1.5 ml and 2 ml)

Temperature resistant up to -196 °C (liquid nitrogen)

Compatible with FastGene® Cryo 2D-Inserts

Internal or external lid versions available

FG-CRY-05S	FastGene® 0.5 ml cryo tubes with external lid (500 tubes)	FG-CRY-In-05S	FastGene® 0.5 ml cryo tubes with internal lid (500 tubes)
FG-CRY-15S	FastGene® 0.5 ml cryo tubes with external lid (500 tubes)	FG-CRY-In-15S	FastGene® 0.5 ml cryo tubes with internal lid (500 tubes)
FG-CRY-20S	FastGene® 0.5 ml cryo tubes with external lid (500 tubes)	FG-CRY-In-20S	FastGene® 0.5 ml cryo tubes with internal lid (500 tubes)
FG-CRY-05RC	FastGene® Cryotube Rack in SBS-Format for 0.5 ml (1.5ml and 2 ml also available)	FG-CRY-2D	FastGene® Cryo 2D-Inserts



Application Note - Bambanker™

JCRB is the second largest cell bank in Japan and has tested Bambanker™ on their 4 most difficult to freeze cell lines (adherent and in suspension). The cell proliferation showed a considerable increase after 1 week when freezing down the cells in Bambanker™ compared to another commercially available cell freezing medium. **Hence, JCRB switched all 1400 different cell lines all to Bambanker™.**

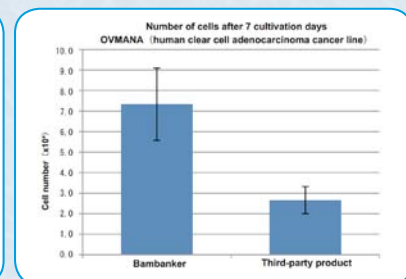
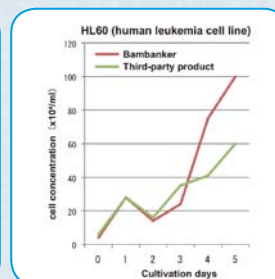
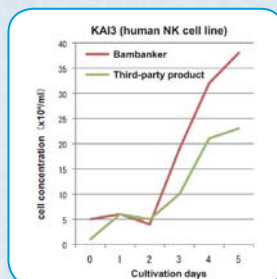
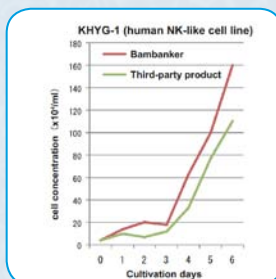
*„We are thankful for the solution of that long-standing problem and **recommend Bambanker™ to all researchers of domestic and foreign cell banks.**“*

National Institute of Biomedical Laboratories JCRB cell bank, Arihiro Ohara JAPAN.

Download the Application Note here
or at www.nippongenetics.eu



Results

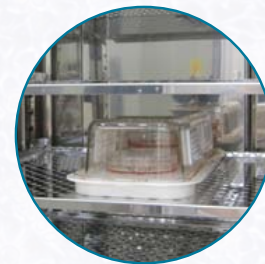


Cell Culture Chamber

Protect your valuable cells

The cell culture chamber maintains a sterile and protected environment for non-filtered cell culture plastics, such as Petri dishes and 6-, 12-, 24-Well plates. The cells

- ✔ Same conditions inside the chamber and an incubator
- ✔ Protective filter (pore size < 0.4 µm)
- ✔ Compatible with Petri dishes and many culture flasks and plates



CC01 FastGene® Cell Culture Chamber

CC01F Filter for FastGene® Cell Culture Chamber



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