NIPPON Genetics

Customers product feedback

Product name: **Bambanker HRM (BBH01)**
Serum-free cryopreservation solution for regenerative medicine research

Application: Improvement of cryopreservation efficiency of human leukemia cell line (RCB1296 HNT-34)

We were allowed to publish the following feedback by the kindness of Kaneda Kazuko from the University of Miyazaki, Faculty of Medicine, Laboratory of Biochemistry and Molecular Biology (now Osaka University Graduate School of Medicine), Japan.

Experimental Method

- We tried to cryopreserve the human leukemia cell line RCB1296 HNT-34, which is cultured and maintained in our laboratory, with home-brewed stock solution (10% DMSO, 90% FCS), a serum free and also a serum containing third party product. As a result in all three cases the cells were alive after thawing, but died after 24h.
- This time we used Bambanker HRM (BBH01) and compared its cryopreservation efficiency to the home-brewed preservation solution.

Freezing method	Preservation solution	Characteristics
Slow method	Bambanker HRM	Serum free, Xeno-free
Slow method	home-brewed	10% DMSO, 90% FCS

Experimental Condition

Used cells : **RCB1296 HNT-34** (human leukemia cell line)
(H.Hamaguchi et al : British jurnal of Hematology, 1997, 98, 399-407)

Cryopreserved cell amount : 1×10^7 cells/1 ml preservation solution in one vial

Freezing Period: 2 days storage in a Bicell bio freezing vessel (Nihon Freezer Co., Ltd.) at -80 ℃ and following 3 days storage in liquid nitrogen

Thawing method: Thawed by a conventional method.

Cluture method after thawing : T25 flasks in culture

Result

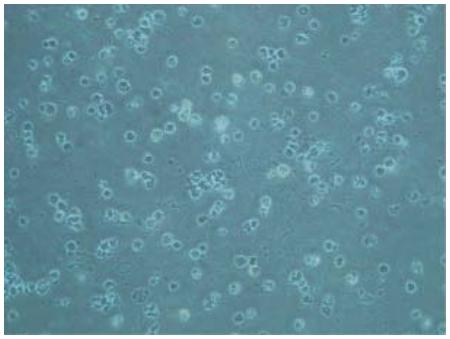

Fig.1: Home-brewed solution (24 h after thawing)

Storage with the home-brewed solution led to many cell debris. We observed that most cells are dead.

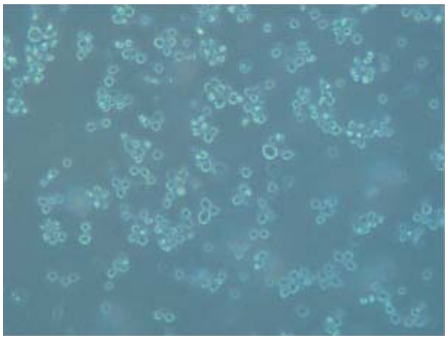

Fig.2: Bambanker HRM (24 h after thawing)

Storage with Bambanker HRM reduced the debris and kept many cells alive.

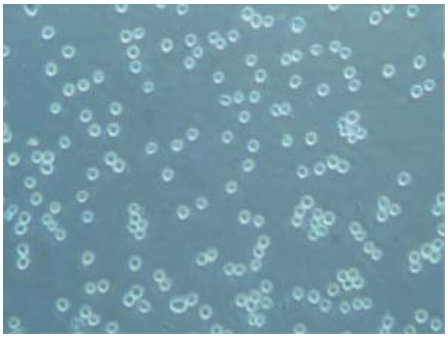

Fig.3: Bambanker HRM (several passages & thawing)

After several times thawing, passaging and freezing again, the cells growth without problems.

Conclusion
Storage of the HNT-34 cell line with home-brewed preservation solution and with third party products both serum and serum free was very difficult. However with Bambanker HRM the survial rate after thawinig is dramatically improved and thus the storage is very convenient.

＜Customers comment＞

Bambanker HRM turned out to be very useful for the cryopreservation of cell lines which previously had a very poor survival rate after thawing. Because the handling of Bambanker HRM is exactly the same as for the former used reagents, we were able to easily introduce it. With the improved survival rate after thawing, we could achieve a very good reproducibility of our experiment.When using human cell lines with a poor viability, we recommend to switch your freezing medium to Bambanker HRM.

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