Freezing preservation of human iPS cell-derived hepatic cells by Bambanker®

The following data was provided by Dr. Atsunori Sato of Tagawa Laboratory, School and Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology.

Conditions

Cells used: Human iPS cells (201B7)

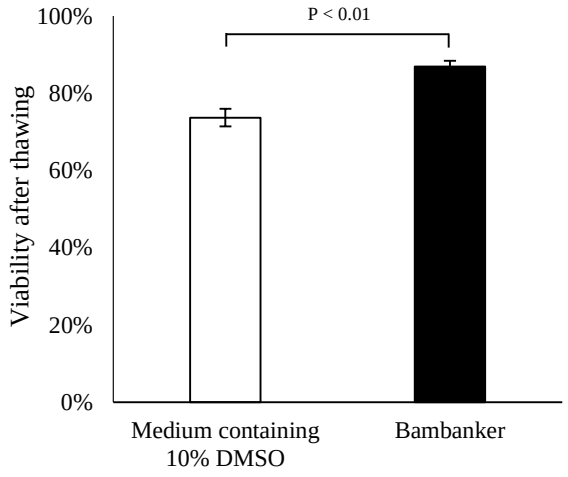
Culture conditions: Hepatic cells were induced using Activin A, FGF2, BMPs, HGF, OSM and DEX.

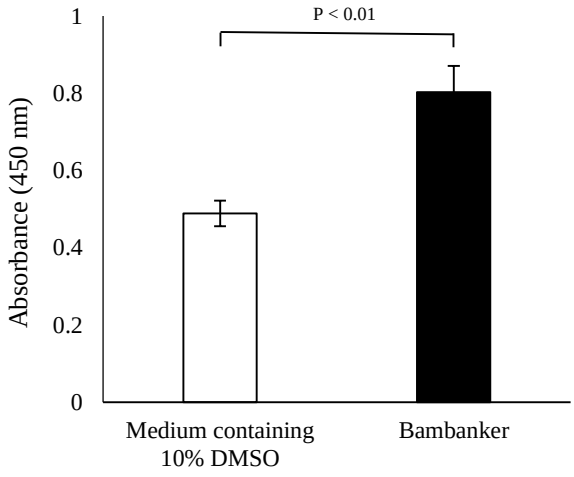
Freezing conditions: Cells were suspended in medium containing 10% DMSO and Bambanker® (CS-02-001) at the concentration of 2.5 × 10^5 cells/mL, and 1 mL of the suspension was dispensed into a freezing tube and frozen at −80° C (slow freezing method). The next day, the tube was transferred to liquid nitrogen.

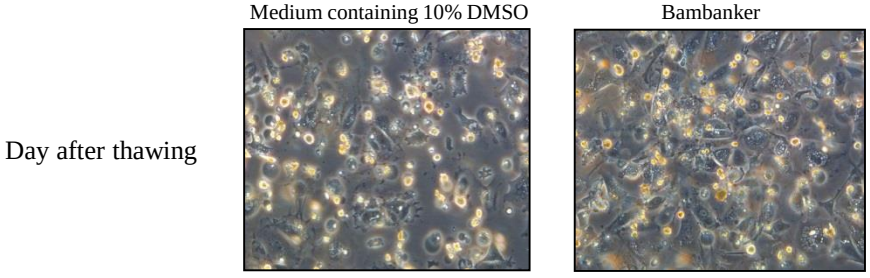
Thawing conditions: The cells were thawed rapidly at 37° C and inoculated into a culture vessel.

Tests after thawing: Cell counting (immediately after thawing), image photographing (day after thawing), and WST-8 assay (day after thawing)

Results







■ It was shown that Bambanker enables freezing preservation of human iPS cell-derived hepatic cells more efficiently than medium containing 10% DMSO.

Comment

This freezing preservation of differentiation-induced cells was our first attempt in this laboratory. The laboratory has used Bambanker for freezing preservation of cells whose cytotoxicity we want to suppress. However, this time, we examined whether Bambanker is also effective for preserving differentiation-induced cells. We found that the cells after freezing preservation using Bambanker maintained their viability as well as the morphology of the cells before the freezing preservation. Therefore, we consider that Bambanker is suitable for freezing preservation of differentiation-induced cells.

Manufacturer

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