Human pluripotent stem (ES/iPS) cells
Proliferation Control Medium

Xyltech BOF-01

R&D; Bourbon Biomedical Advanced Research Laboratories, Inc.
Supplier; Nipro Corporation

72hr change-free medium culture of human ES/iPS cells in Xyltech BOF-01

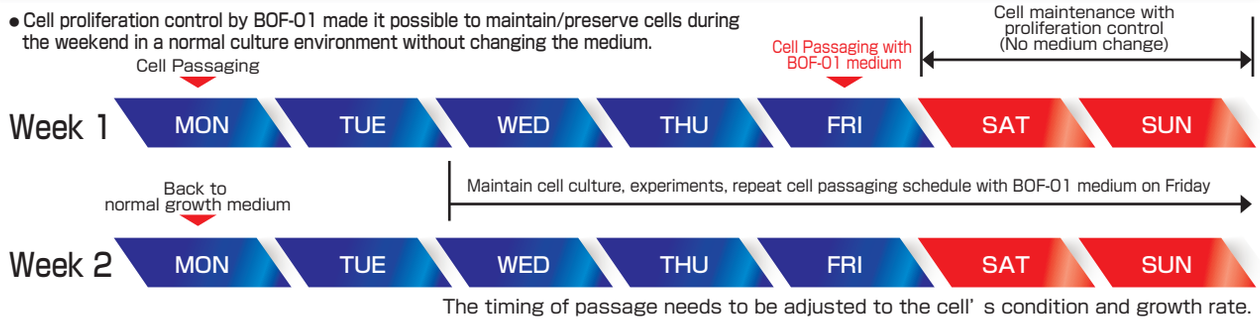
- BOF-01 is a novel basal culture medium which can suppress proliferation of human ES/iPS cells on feeder cell layers.
- BOF-01 can be used by completely replacing the basal culture medium (e.g. DMEM/F12) of the human ES/iPS cells.
- Human ES/iPS cells can be maintained with BOF-01 for about 3days (up to 72 hours) without changing medium under normal culture conditions (37°C, 5% CO2).
- After suppression of cell proliferation with BOF-01, cell growth can be resumed by changing normal growth medium.
- This product does not contain glucose.

Note

- It cannot be used under feeder-free culture conditions.
- BOF-01 does not contained growth factors nor supplements (such as KSR, bFGF etc.).It is required to add necessary factors appropriately to prepare complete culture medium.
- Not all human ES/iPS cell lines have been tested with this product. None of non-stem cell lines are profiled either.
- This product does not inhibit cell proliferation completely.
- Cellular condition under BOF-01 culture depends on the state and culture condition of the human ES/iPS cells.
- This product is for research use only, and not permitted for human or animal diagnostic or therapeutic uses.

Overview of Weekend-free Protocol

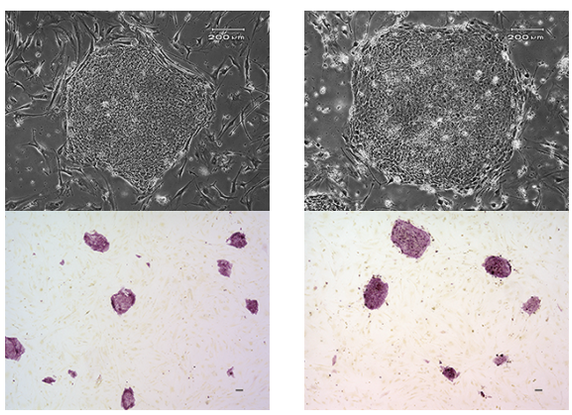
- Cell proliferation control by BOF-01 made it possible to maintain/preserve cells during the weekend in a normal culture environment without changing the medium.



The timing of passage needs to be adjusted to the cell' s condition and growth rate.

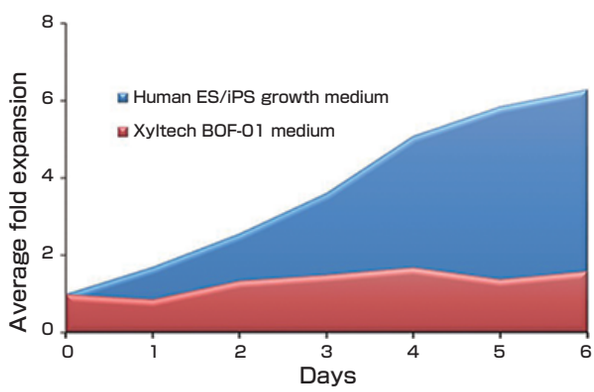
Morphology of Undifferentiated Cell Colony and Effect of Proliferation Control

- Phase images of cell colonies and alkaline phosphatase stain of human iPS cells before and after proliferation control culture by BOF-01 (201B7 strain).



Normal culture　　BOF-01 medium

- Comparison of cell proliferation rates of hiPS cells cultured in BOF-01 medium and normal human ES/iPS growth medium.

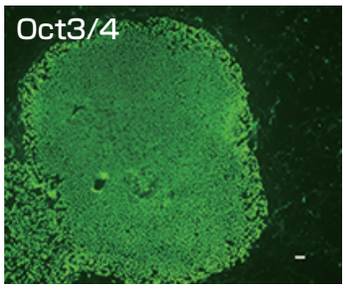


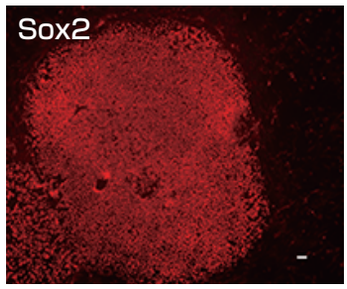
※The composition of normal growth medium (human ES/iPS medium) and BOF-01 medium are based on reference.
Curr Protoc Stem Cell Biol.2009 Jun; Chapter 4: Unit 4A.2.

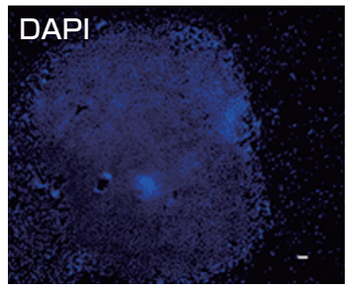
Xyltech BOF-01 suppressed cell proliferation while maintaining human iPS cells in undifferentiated state.

Undifferentiation markers expression in human iPS cells by BOF-01

•The high expression of pluripotent stem cell markers was confirmed by immunofluorescence staining of human iPS cells (201B7) maintained in BOF-01 medium for 3 days.



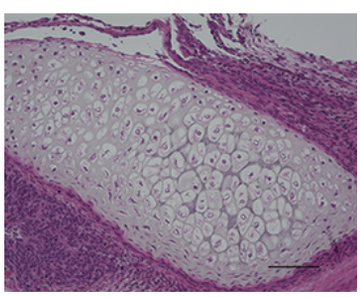




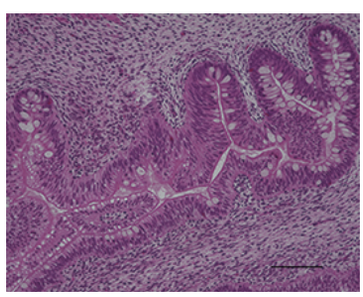
Xyltech BOF-01 maintained human iPS cells in undifferentiated state.

Differentiation of Three Germ Layers (Teratoma Assay)

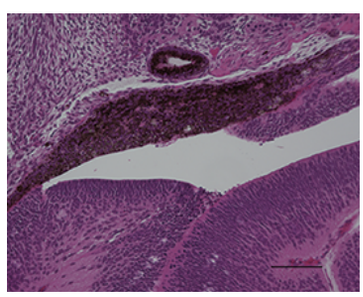
•The ability of differentiation was confirmed by transplanting into immunodeficient mouse by human iPS cells (201B7) maintained in BOF-01 medium for 3 days to form teratoma.



Mesoderm
(Chondrocyte)



Endoderm
(Alimentary canal epitherial cell)

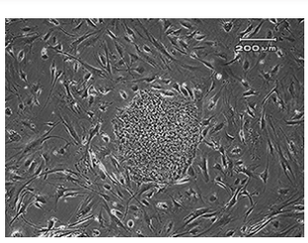


Ectoderm
(Pigment cell)

Xyltech BOF-01 maintained human iPS cells in pluripotent state.

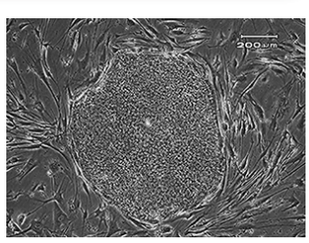
Colony morphology changes during proliferation control culture

HumanES/iPS cells may change the morphology of colonies while cultured in BOF-01 medium. The original morphology can be resumed after changing back to normal human ES/iPS medium (Phase images show the example of 201B7 cells).



Normal culture (Day 1)

BOF-01 medium (Day 4)



Back to normal culture (Day 5)

Code No.	Product Type	Expiration	Storage	Size
87-280	Xyltech BOF-01	12 months	2~8℃	100mL

ブルボン再生医科学研究所
Bourbon Biomedical Advanced
Research Laboratories, Inc.
1-3-1, Ekimae, Kashiwazaki City, Niigata Pref.,
945-0055, Japan
E-mail: support@bourbon-barl.co.jp