

For the further development of stem cell research

CultureSure™ CEPT Cocktail (1,000×)

CEPT is a cocktail of small molecules developed at the National Institutes of Health (NIH). It contains four components, and CEPT is an acronym for them: **C**hroman 1, **E**mericasan, **P**olyamines, and **T**rans-ISRIB. Compared to existing methods, CEPT also improves cell viability in stem cell research, including embryoid body and organoid formation, single cell cloning, and genome editing using hPSCs.¹⁻⁵⁾

*This product is manufactured and sold under license from NIH.

References

- 1) Chen, Y. *et al.* : *Nat. Methods*, **18** (5), 528 (2021).
- 2) Tristan, C.A. *et al.* : *Stem Cell Reports*, **16**(12), 3076 (2021).
- 3) Tristan, C.A. *et al.* : *Nat. Protoc.*, **18**(1), 58 (2022).
- 4) Deng, T. *et al.* : *Stem Cell Reports*, **18**(4), 1030 (2023).
- 5) Takeshi, W. *et al.* : *Regen. Med.*, **18**(3), 219 (2023).

Features

- Protects human ES/iPS cells from stresses including DNA damage, helping to **maintain cell structure and function**
- Filter-sterilized, **ready-to-use** cocktail solution
- One of the CultureSure series products that are **tested for endotoxin contamination and are mycoplasma negative**



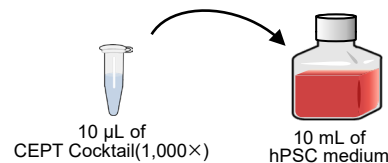
Analytical Data

- Concentration (HPLC): Passed
- Appearance: Liquid
- Endotoxin: Less than 3 EU/mL
- Tested for sterility
- Tested for negative mycoplasma contamination

How to Use

Add 1/1,000 volume of this product to the culture medium and mix thoroughly before use.

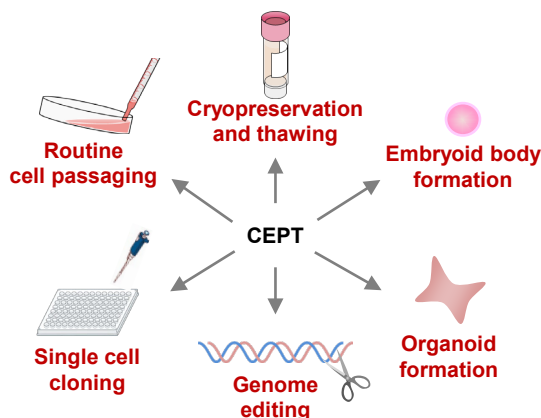
Note: To avoid repeated freezing and thawing, it is recommended to aliquot in small volumes and freeze.



Samples and Applications

Samples: Human ES / iPS cells

Applications:



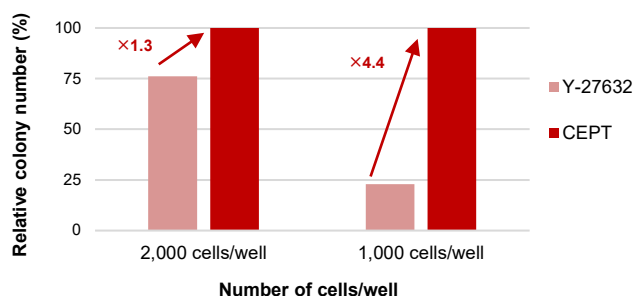
Example of use: passaging of human iPS cells

1. Remove the medium from the culture dish (10 cm).
2. Add 5 to 10 mL of D-PBS(-) to the dish and rinse.
3. Remove D-PBS(-).
4. Add 2 to 5 mL of a cell dispersing reagent.
5. Allow to stand in an incubator set to 5% CO₂, 37 °C.
6. Add 10 mL of hPSC medium+CEPT
7. Disperse the hPSC colonies into single cells by pipetting.
8. Transfer the medium with dispersed cells into a tube.
9. Centrifuge the tube for 5 min at 200 x g, room temperature, and remove the supernatant.
10. Add 10 mL of hPSC medium+CEPT to the tube to suspend the cell pellet.
11. Count cells.
12. Seed an appropriate amount of human ES/iPS cells in a new culture dish added hPSC medium+CEPT in advance.
13. Culture in an incubator set to 5% CO₂, 37 °C.
14. The following day, replace the medium with hPSC medium without CEPT.

Wako Cat. No.	Product Name	Grade	Package Size
033-26071	CultureSure™ CEPT Cocktail (1,000×)	for Cell Culture	300 µL

Performance data

Colony Formation Test

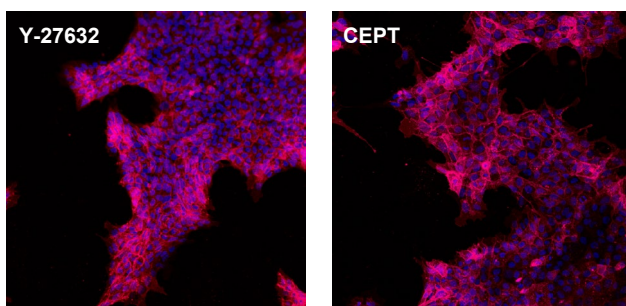


Cell strain	human iPS cell 201B7
Medium	StemSure® hPSC Medium Δ containing 35 ng/mL bFGF
Coating	Matrigel® hESC-Qualified Matrix
Duration of Culture	8 days
Additives	Y-27632 or CEPT was added at the time of seeding. Cells were cultured without the addition from the following day onward.

Result

When the number of cells seeded was small, more colonies were formed in the CEPT-supplemented cultures than in the Y-27632-supplemented cultures.

Undifferentiated State Maintenance



RED : rBC2LCN-635 (human iPS cell membrane stain)

BLUE : DAPI (nuclear stain)

Note: BC2LCN is a recombinant lectin with high affinity for cell surface glycans of human ES cells and human iPS cells.

Cell strain	human iPS cell 201B7
Medium	StemSure® hPSC Medium Δ containing 35 ng/mL bFGF
Coating	Matrigel® hESC-Qualified Matrix
Number of seeded cells	5,000 cells/well (1well = 3.8 cm ²)
Duration of Culture	7 days
Additives	Y-27632 or CEPT was added at the time of seeding. Cells were cultured without the addition from the following day onward.

Result

No difference in cell morphology was observed between the addition of CEPT and Y-27632. The undifferentiated state was also maintained.

Related Products

Wako Cat. No.	Product Name	Grade	Package Size
197-17571	StemSure® hPSC Medium Δ	for Cell Culture	100 mL
193-17573			100 mL×4
064-05381	Fibroblast Growth Factor (basic)(FGF-basic / bFGF / FGF2), Human, recombinant, Animal-derived-free(154aa)(powder)	for Cell biology	50 μg
068-05384			100 μg
060-05383			1 mg

Listed products are intended for laboratory research use only, and not to be used for drug, food or human use. / Please visit FUJIFILM Wako Laboratory Chemicals site: <https://labchem-wako.fujifilm.com/> / This leaflet may contain products that cannot be exported to your country due to regulations. / Bulk quote requests for some products are welcomed. Please contact us.

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