

FCeM[®] 3D Cell Culture

Nissan Chemical's Cell Culture system is used for mass production and maintenance of ES/iPS cells. This single use system makes it possible to conduct expansion culture in the order of 10⁸ -10⁹ cells. The system is optimized with 3D cell culture medium containing FP polymer that allows for suspension culture of ES/iPS cells.





1. Semi-closed Culture System

Significantly reduces the risk of contamination as the culture solution is not exposed to air during culture and passaging.



3. Cell Passaging without Enzymatic Treatment

Cell spheres grow to a size of $\sim 200~\mu m$ in diameter in the system. They can be split into smaller spheres, 100 μm or less, using the sphere splitting module while maintaining cell viability.



The sphere collecting module can be used to collect cells and then re-suspend them with fresh medium.



4. Cell Culture in Conventional Incubator

The system can be used in a conventional incubator as the cell culture bag has high gas permeability.





5. No Medium Change Required

Fed-batch culture methods have been optimized using FCeM[®] 3D cell culture medium with FP polymer. This allows for a flexible culture schedule including weekend-free culture.



Fed-batch Culture Method ES/iPS cell clumps are seeded into the cell culture bag containing FCeM[®] 3D cell culture medium with FP polymer. The cell culture medium is added to the bag on Day 1 and Day 4. The cell clumps grow into spheres of ~200 µm in diameter in seven days. On Day 7, the cells are passaged and the medium is exchanged using the sphere collecting module. The cells then pass through the sphere splitting module to obtain smaller cell spheres of uniform diameter (100 µm or less). Enzymatic treatment and centrifugation are NOT required during this process.



3D Culture Starter Kit

Substrate/Coating is not required
Centrifuge tube can be used for culture

The FCeM[®] 3D Culture Starter Kit is used for small scale 3D culture of ES/iPS cells. The kit consists of components necessary to passage the cells and split the cells into uniform sized spheres. 3D medium for cell culture can be prepared using the FCeM[®] Preparation Kit (sold separately). The kit can also be used in a conventional incubator.

• Spheres are recovered using the collecting module

• Cells are passaged without enzymatic treatment and centrifugation







Features

[Distributor]

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