



prevelex-CAT[®]

Highly Efficient and Precise Spheroids Production

CAT: Cell Aggregation Technology

prevelex-CAT[®] have been developed as an innovative new spheroids production system to meet the growing need for large-scale spheroids production. prevelex-CAT[®] is a combination of adhesive materials (CAT material) and low attachment coating (prevelex[®]), which allows for self-organized, size controlled, and large-scale spheroids production.

When cells are seeded onto the prevelex-CAT[®] plate, they gather and adhere on the CAT material. After the incubation, spheroids are spontaneously formed. The spheroid size depends on the CAT spotted area.



Cell adherence only on the CAT material

Spontaneous spheroids formulation

Control of Spheroid Size

prevelex-CAT[®] system enabled to control the size of spheroids according to the CAT spotted area. The diameter of spheroid is in correlation to that of the CAT spot. The spotted area of the CAT material can be customized to the required spheroid size.



Diam eter [µm]	Pitch [µm]	Diameter of spheroid [µm]	Number of spheroids per well in 6-well plate
180	250	100	17,000
400	500	159	4,300
700	800	221	1,700
900	1000	258	1,000

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Application to Various Type of Cells

Cell	Туреѕ	Morphology	Serum content
iPSC (1383D2) 1)	Human iPS cell	ESC-like	Free
Cellartis [®] hiPS Beta Cells	iPSC derived beta cells	Epithelial	Free
ADSC ²⁾ /BM-MSC	Human mesenchymal stem cell	Fibroblast	0-2%
HFDPC	Primary human dermal papilla cells	Fibroblast	4%
PXB cell ³⁾	Primary hepatocytes derived from chimeric mice	Epithelial	?
TIG-3 ⁴⁾	Human fetal lung fibroblast cell line	Fibroblast	10%
HepG2	Human hepatoblastoma-derived cell line	Epithelial	10%
C3H/10T1/2 ⁵⁾	Fetal mouse fibroblast cell line	Fibroblast	10%
NIH/3T3 ⁶⁾	Fetal mouse fibroblast cell line	Fibroblast	10%

Licensed from iPS Academia Japan 2) Provided by CellSource 3) Transferred from PhoenixBio Inc.
Obtained through JCRB cell bank 5) Provided by RIKEN BRC 6) Provided by ATCC

Application to Cryopreservation



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