

Primary

Cell Culture 혁신

The AVATAR[™] Cell Control System

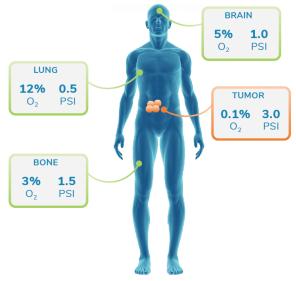
in vivo와 가장 유사한 환경!

O₂와 **압력(psi)**을 손쉽게 조작!

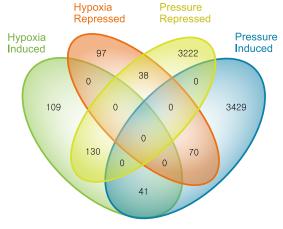
획기적인 Cell Culture결과!

- High Transfection Efficiency
- Rapid cell Expansion
- Easy Cell Control: Differentiation / Stemness
- Improve your primary tumor culture





인체 내 각 기관마다 압력 및 산소 조건이 다릅니다. 일반 incubator와 비교할 수 없는 culture 환경을 제공합니다.



Venn diagram showing the number of induced and repressed transcripts in each RNA-seq transcriptome produced in response to iPSCs exposed to hypoxia, pressure, or both.

압력 및 산소조건에 의해 달라지는 gene expression 양상을 확인하세요. Cell에 맞는 Culture 환경으로 올바른 data를 얻으 실 수 있습니다.



Specifications

WEIGHT:63 lbs(28.6 kg)

SIZE (WxDxH): 13.5" x 13.1" x 12"(34.3 x 33.3 x 30.5 cm)

CHAMBER CAPACITY: 224 cu in. / 3.7L POWER: 100-240 V AC, 50/60Hz, 2Amps

GAS REQUIREMENTS: In-line 25 psi N2, 25psi CO2



Cell Culture 혁신

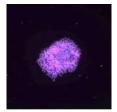
Stem Cells / Immune Cells / Neurons / Fibroblasts / Cardiomyocytes / Tumor Cells / Organoids

iPSCS: Stemness Marker 발현 증가(SOX2)

MAINTAINING PLURIPOTENCY IN HUMAN STEM CELLS



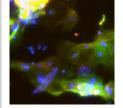


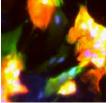


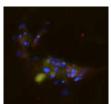
Hypoxia Only

Hypoxia + Pressure

CARDIOMYOCYTES: Mature Cardiac Marker발현 증가(Cardiac Troponin) Targeting Mature Cardiac Protein Profile





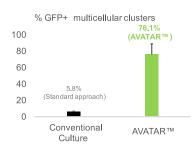


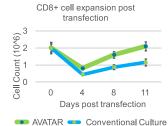
Standard Incubator

normoxia – 2 PSI

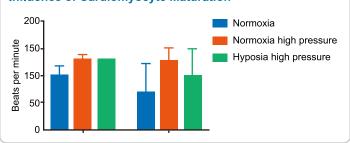
hypoxia - 2 PSI

High Transfection efficiency

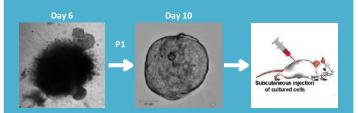




Influence of Cardiomyocyte Maturation

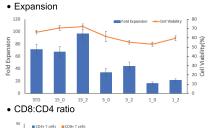


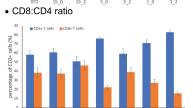
Improve organoid generation



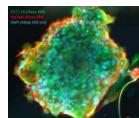
Robust growth and efficient passaging of prostate tumor organoids enable PDX model generation in as little as 10 days.

Cell Culture Control





Expand Difficult cells



Pabcreatic ductal adenocarcinoma

NK-mediated tumor cell killing assay

1. A healthy donor's NK Cells were enriched using MACS

NK cells

2. NK Cells were maintained and expanded for 7days under the following AVATAR™ culture conditions



Varying pressure culture conditions for NK expansion

3. 24 hours of NK and DU145 prostate cancer cell co-culture under the following AVATAR™ culture conditions

NK cells

Prostate Tumor Cells

(DU145)





Varing pressure culture conditions during NK-mediated cell killing

 Quantification of NK-mediated tumor cell killing(brightfield-phase contrast imaging)



Determination of tumor - cell killing by AVATAR™ preconditioned NK cells

