

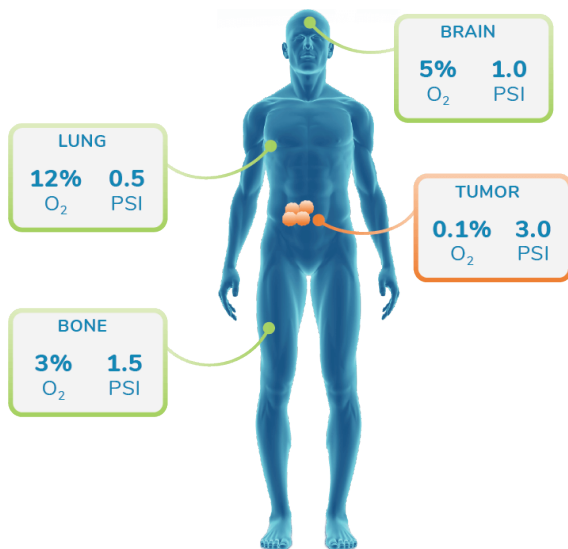
Cell Culture 혁신

The AVATAR™ Cell Control System

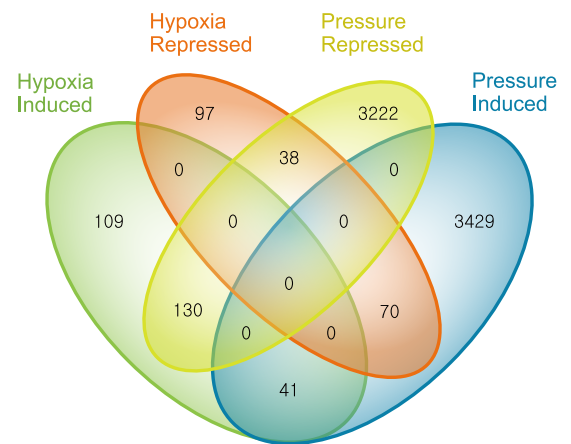
- in vivo와 가장 유사한 환경!
- O₂와 압력(psi)을 손쉽게 조작!
- 획기적인 Cell Culture결과!



- 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 얻으실 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

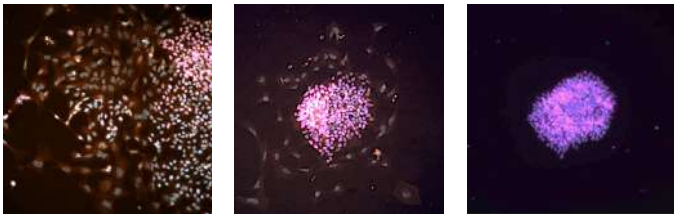


Cell Culture 혁신

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

iPSCs: Stemness Marker 발현 증가(SOX2)

MAINTAINING PLURIPOTENCY IN HUMAN STEM CELLS



Standard CO₂ Incubator

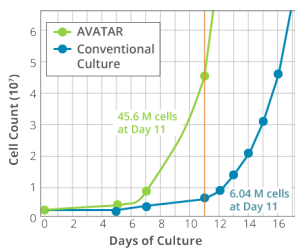
Hypoxia Only

Hypoxia + Pressure

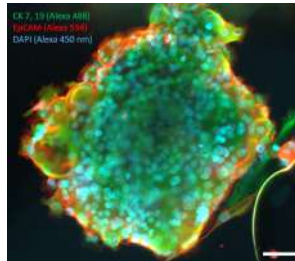
Fast expansion of immune cells

Expand Difficult cells

일반 incubator 보다 더 빠른 Cell 획득

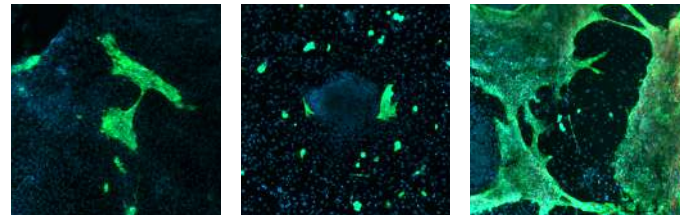


7.5X more immune
CD8+ T-Cells after 11 Days



Pancreatic ductal adenocarcinoma

CARDIOMYOCYTES: Mature Cardiac Marker 발현 증가(Cardiac Troponin)
TARGETING MATURE CARDIAC PROTEIN PROFILES

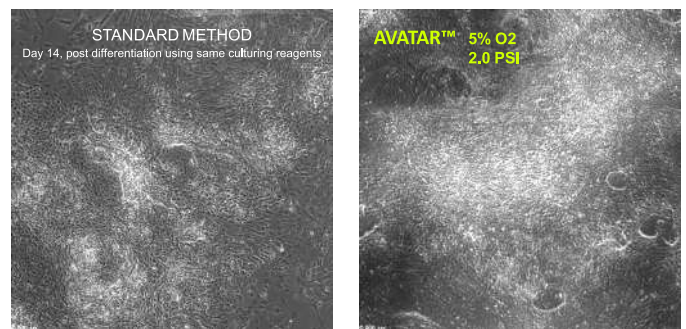


Standard Incubator

5% O₂ + PSI

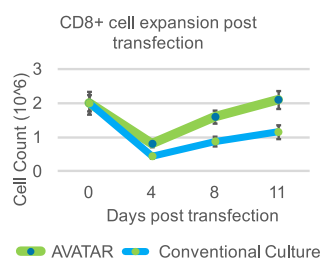
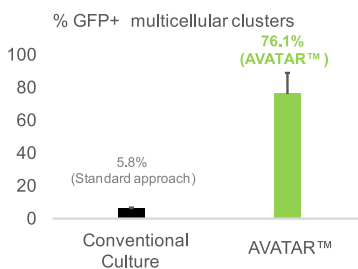
5% O₂ + 2 PSI

Enhanced iPSC differentiation



Standard vs. AVATAR
동영상 확인 필수!

High Transfection efficiency



Improve organoid generation



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

NK-mediated tumor cell killing assay

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

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

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

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

NK cells



Varying pressure culture conditions for NK expansion



NK cells



Varying pressure culture conditions during NK-mediated cell killing

Prostate Tumor Cells (DU145)



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