

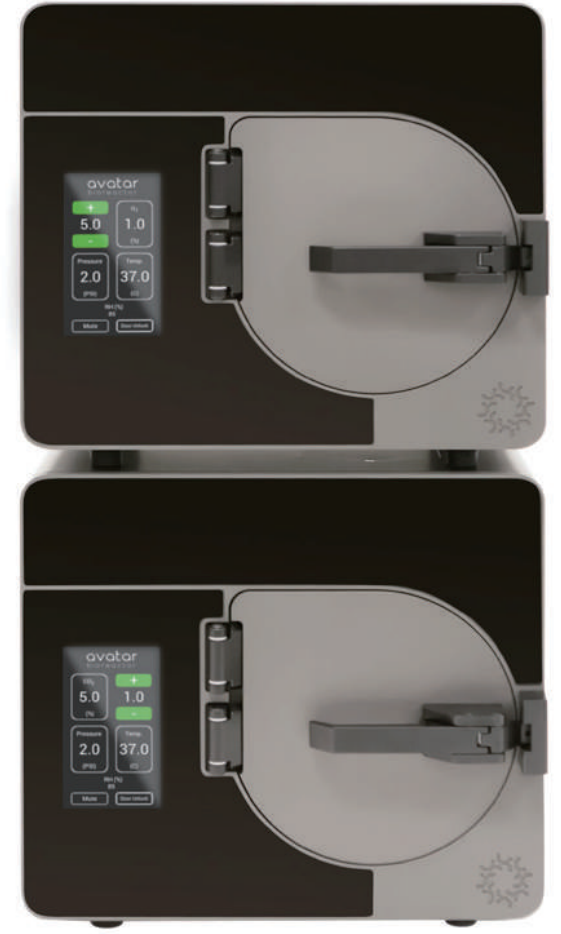
# Primary Cell Culture 혁신

## The AVATAR™ Cell Control System

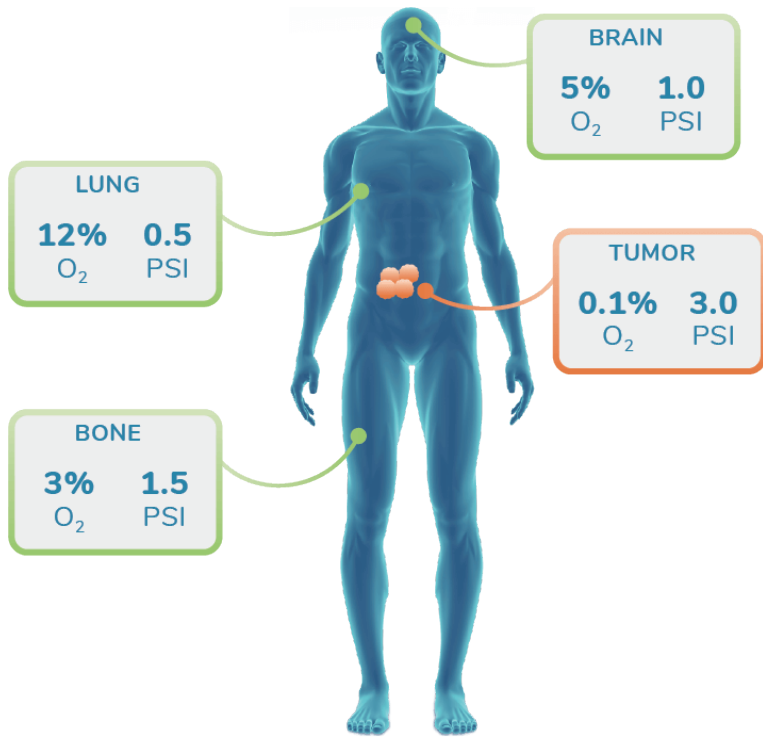
in vivo와 가장 유사한 환경!

O<sub>2</sub>와 압력(psi)을 손쉽게 조작!

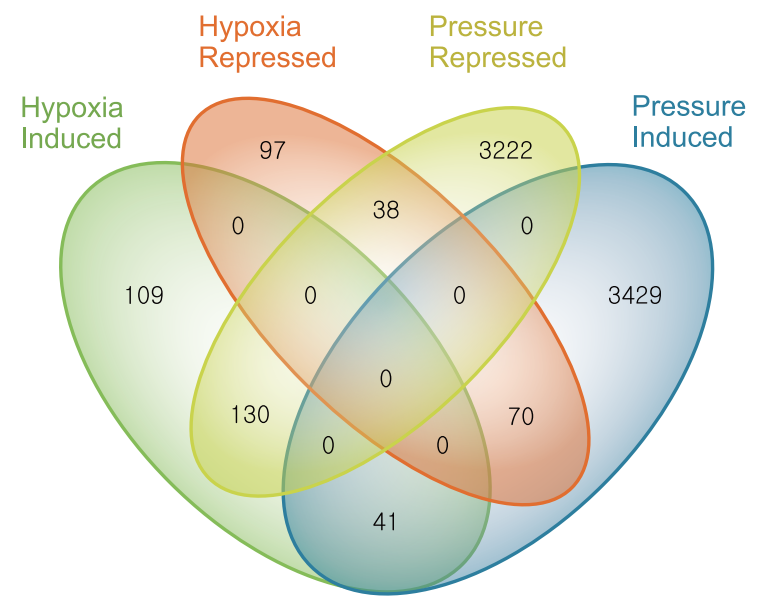
획기적인 Cell Culture결과!



- 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 N<sub>2</sub>, 25psi CO<sub>2</sub>



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## Case Study

# Cell Culture 혁신

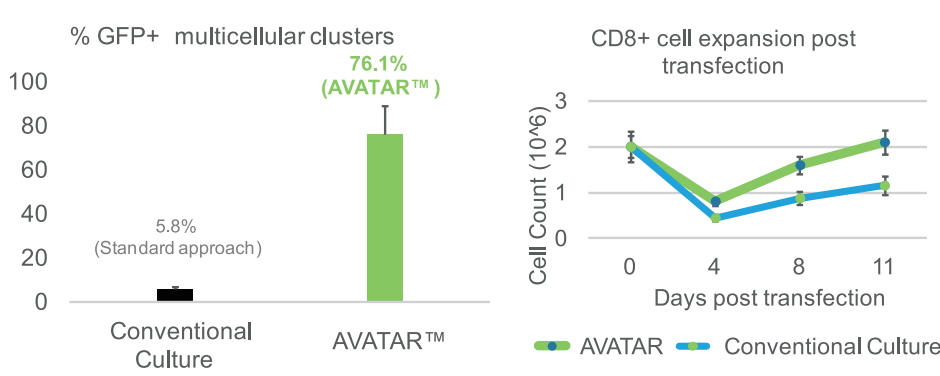
Stem Cells / Immune Cells / Neurons / Fibroblasts / Cardiomyocytes / Tumor Cells / Organoids

iPSCs: Stemness Marker 발현 증가(SOX2)

### MAINTAINING PLURIPOTENCY IN HUMAN STEM CELLS

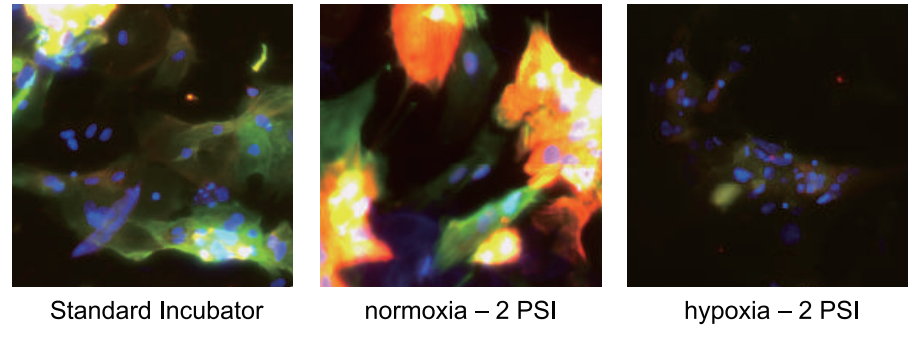


### High Transfection efficiency

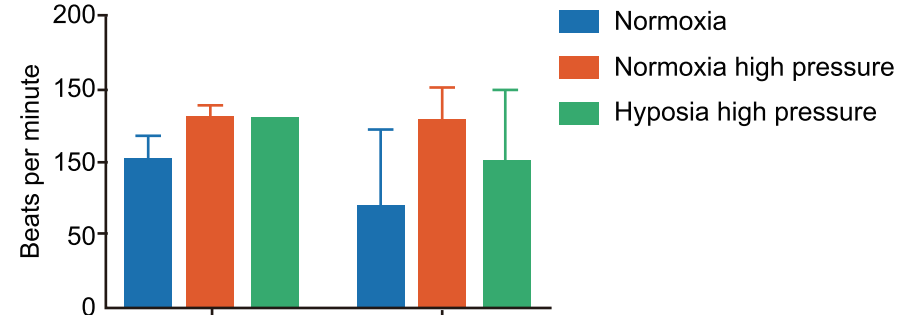


CARDIOMYOCYTES: Mature Cardiac Marker 발현 증가(Cardiac Troponin)

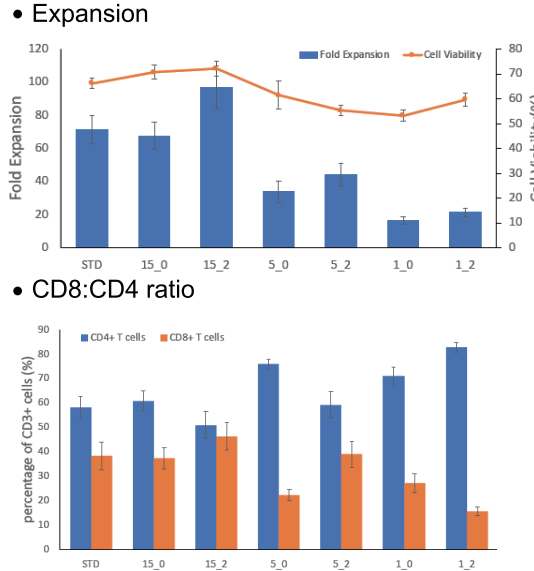
### Targeting Mature Cardiac Protein Profile



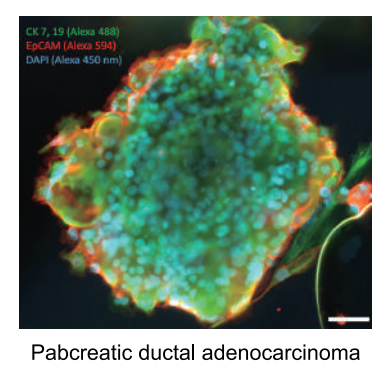
### Influence of Cardiomyocyte Maturation



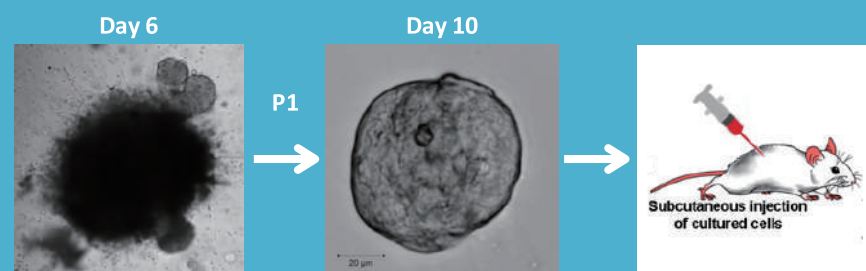
### Cell Culture Control



### Expand Difficult cells



### 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 7days 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)