



Avatar bioreactor



Reproducing life through revolutionary capabilities

Your biological samples are precious and unique. They also require **real-life conditions** to thrive and generate **meaningful results**. The Avatar System is the first commercially available cell culture system capable of reproducing the diverse range of **in vivo microenvironments** found within the human body.

The Avatar system can mimic the oxygen and pressure levels of human tissues.



	TUMOR	LUNG	BRAIN
Pressure	3.0 psi	1.0 psi	2.0 psi
O ₂	0.1 %	5 %	3 %
CO ₂	5 %	5 %	5 %
Temperature	37 °C	37 °C	37 °C



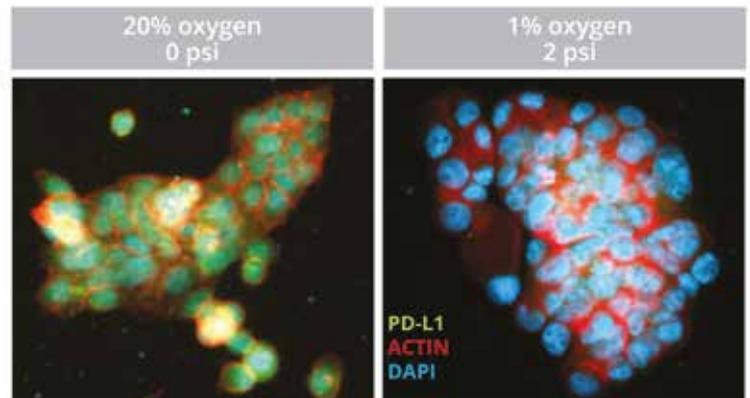
Accelerate your biomedical research

Biologically relevant results

By **reproducing physiological conditions**, the Avatar System cultures cell samples in the most suitable environment to deliver biologically relevant results. Avatar System **regulates O₂, CO₂, pressure, and temperature** to recreate the native in vivo conditions in which the sample was derived. These revolutionary capabilities enable the culturing of difficult to grow patient samples, from primary cells, stem cells to tumor cells.

Features and benefits

- Scalable design with a small footprint
- Low operating costs and energy efficient
- High accuracy and fast response time
- Simple interface with real-time monitoring
- Copper based design to reduce contamination risk
- Next generation primary cell culturing platform



Pancreatic cancer cell lines (PANC10) cultures under conditions mimicking the metastatic niche (low oxygen and high pressure) decreases the expression of immunotherapeutic target PD-L1 (green, right image).

See the difference

Unlike traditional incubators and hypoxia chambers, the Avatar System **controls both hypoxia and pressure**, while providing chemically-defined, xeno-free culture media to maintain a variety of **primary cell** types. Samples maintained under these customized conditions exhibit near-native morphology and gene expression profiles, making the results from cultured samples biologically meaningful.



Avatar specifications

WEIGHT:	63 lbs (28.6 kg)
SIZE (W x D x H):	34.3 x 33.3 x 30.5 cm
CHAMBER CAPACITY:	224 cu in. / 3.7 l
POWER:	100 - 240 V AC, 50/60Hz, 2 Amps
GAS REQUIREMENTS:	In-line 25 psi N ₂ , 25 psi CO ₂



accela s.r.o., Služeb 4, 108 00 Prague 10, Czech Republic
Tel.: +420 255 700 886, Fax: +420 272 700 882
accela@accela.eu, www.accela.eu