

# 3DSphearo™ Ultra-low Adsorption Surface

Enable cell spheroid culture in a rapid, consistent, and highly reproducible manner

Compared with the traditional two-dimensional (2D) culture model, the three-dimensional (3D) spheroid model can better simulate the three-dimensional cell networks, cell-matrix, and cell-cell interactions. Therefore, the 3D spheroid model is of great significance for drug screening, in vitro tumor research, and the exploration of stem cell differentiation and sorting.

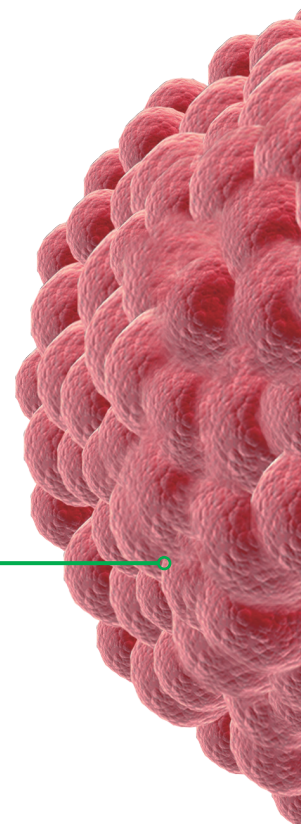
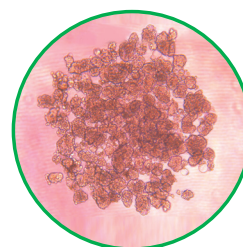
The 3DSphearo™ Ultra-low Adsorption Surface of JET BIOFIL is designed for spheroids (e.g. 3D tumor spheroid) and organoid cultures, providing a variety of product forms such as culture plates, culture dishes, and culture flasks. After the surface of the product is subjected to special gel treatment, the product has extremely strong anti-protein adsorption and anti-cell attachment, and there is almost no cell attachment on the surface, which is conducive to the suspension growth of cells and enables cell spheroid culture in a rapid, consistent, and reproducible manner.

Specification: Ultra-low adsorption cell and tissue culture plates (6 wells; 96 wells, flat bottom; 96 wells, U bottom)

Ultra-low adsorption culture dishes (60 mm; 100 mm)

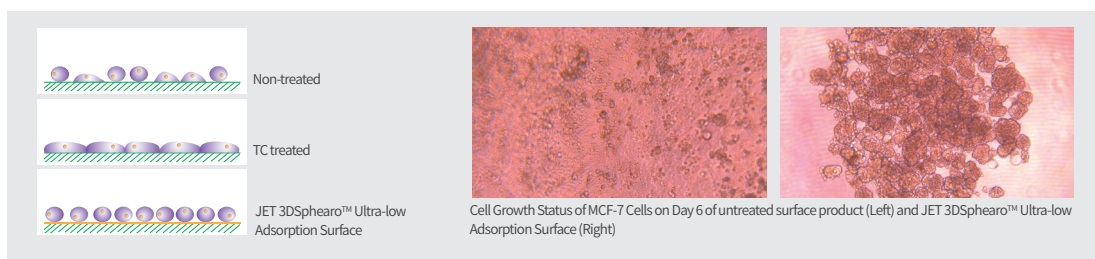
Ultra-low adsorption culture flask T75

Material: Polystyrene (PS), Flask cap: High-density polyethylene (HDPE), conforming to USP Class VI standards



## Features

- ◊ The Ultra-low Adsorption Surface has a covalently bonded hydrogel layer with extremely strong anti-protein adsorption and anti-cell attachment, which can effectively inhibit cell attachment and minimize protein adsorption, enzyme activation, and cell activation
- ◊ The surface is non-cytotoxic, biologically inert and non-degradable
- ◊ The coating on the surface is firm and convenient for daily experimental operation
- ◊ It has been verified by different cell culture tests that there is almost no cell attachment on the surface and enables cell spheroid culture in a rapid, reproducible, consistent, and reliable manner
- ◊ Provide a variety of Ultra-low Adsorption Surface to meet different experimental needs of customers
- ◊ Each package bag is printed with lot No. for quality traceability
- ◊ Sterilized by irradiation, SAL 10<sup>-6</sup>, DNase/RNase-free, non-pyrogenic, and non-cytotoxic



## Applications

- ◊ Construction of 3D Tumor Spheroids and Embryoid Bodies
- ◊ Formation of Neurospheres
- ◊ Screening of Suspended Cells
- ◊ Studies on Stem Cells
- ◊ Studies on Cancer Cells and Simulated Tumor Growth
- ◊ .....

## Cell culture tests of different surface products - 3DSphearo™ has better cell spheroid-forming performance

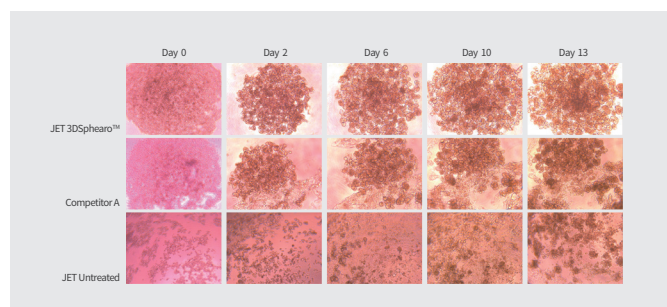


Figure1:Sphere-formation Assay

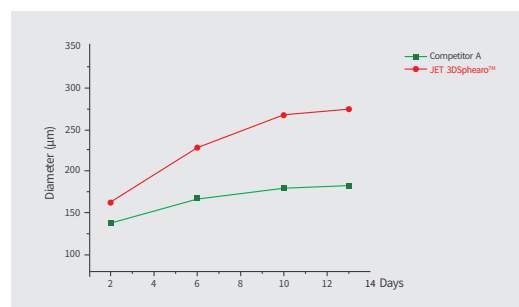


Figure 2: Cell Diameter Measurement after Spheroid-forming Culture

Figure 1: MCF-7 cells were seeded in U-bottom 96-well culture plates of different products at a seeding density of 5000 cells/well, and the growth status of the cells was observed regularly.

Figure 2: After the 13th day of cell culture, each well of each plate was photographed using a fluorescence microscope, and the length of the spheroid diameter was measured.

The results showed that compared with the similar imported products, the growth status of cells cultured on the surface of 3DSphearo™ was significantly better and the spheroid size was also larger when the cell culture time was not more than 13 days.

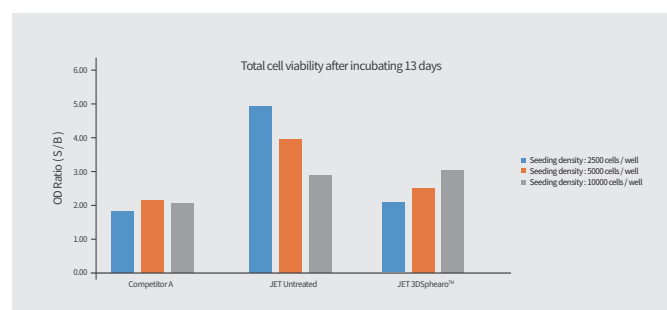


Figure 3: Total Cell Viability Test after Spheroid-forming Culture

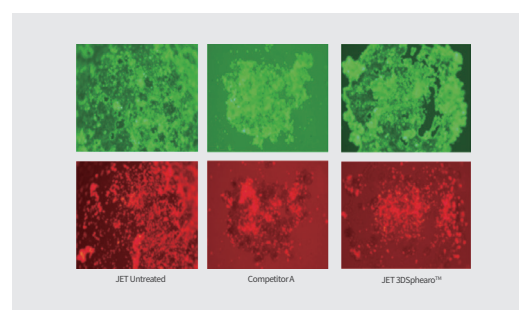


Figure 4: Cell Death/Viability Test after Spheroid-forming Culture

Figure 3: After the 13th day of cell culture, 20  $\mu$ L/well of CCK-8 solution was added into each sample well with different seeding densities, and allowed to develop for 2 h at room temperature in the dark. Then the developed samples were transferred to a flat-bottomed 96-well plate at a volume of 120  $\mu$ L/well, and immediately placed in ELISA equipment for reading of absorbance values to calculate the total cell viability.

Figure 4: After the 13th day of cell culture, the cells in each well of each plate with a seeding density of 5000 cells/well were stained with a fluorescent dye and placed under a fluorescence microscope for filming and recording.

The results showed that the cell viability and cell survival rate of cells on the 3DSphearo™ surface were better than those of similar imported products.

## Ordering Information

Cat. No.	Product Name	Specification	Surface Type	Sterile	Qty. Per Bag/Case
TCP030006	Culture plate	6-well	Ultra-low adsorption	Y	1/60
TCP030096	Culture plate	96-well (flat bottom)	Ultra-low adsorption	Y	1/60
TCP130096	Culture plate	96-well (U bottom)	Ultra-low adsorption	Y	1/60
TCD030060	Culture dish	60 mm	Ultra-low adsorption	Y	5/80
TCD030100	Culture dish	100mm	Ultra-low adsorption	Y	5/80
TCF030250	Culture flask	T75 (250 mL, vent)	Ultra-low adsorption	Y	1/60

This product is for scientific research use only. Do not reuse it.

