

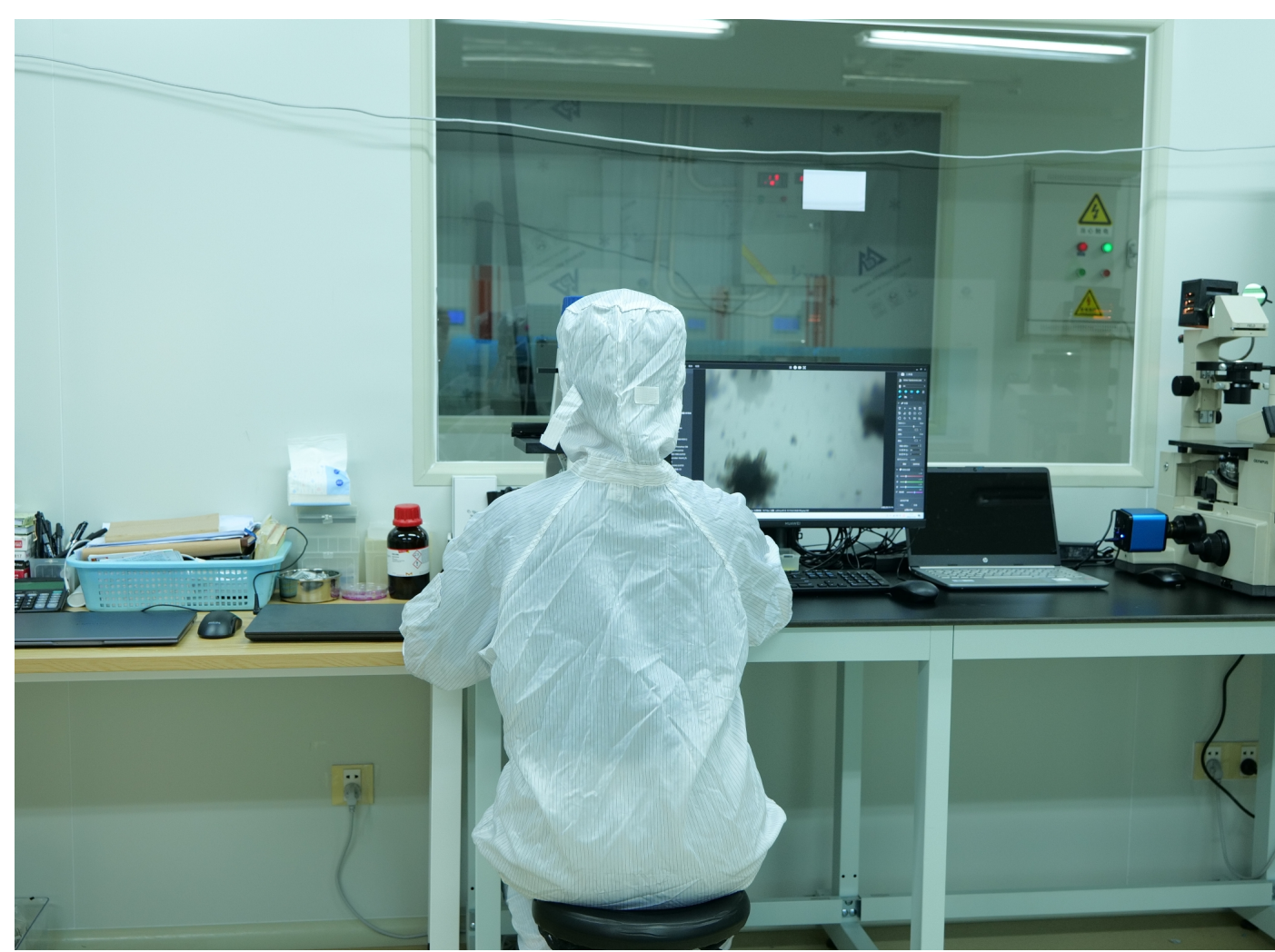
Product Manual

Focus On 3D Cell Culture

1、Company Profile

Xiamen Mogengel Biotechnology Co.,Ltd is located in Xiamen, China. The company is committed to the R&D and industrialization upgrading of the core raw materials of 3D cell culture. It is a domestic enterprise that starts from scientific research and develops and produces the whole process independently from experimental research. At present, the company's products include matrigengel, organoid medium, cytokines, 3D cell culture consumables, 3D cell culture smart microscope and so on. The company has four research and development centers: molecular cloning and cell editing center, laboratory animal center, protein expression and purification platform, organoid quality control system and automation.

The team has more than ten years of organoid technology research foundation, strong strength, firm will for scientific research, rigorous academic attitude, bold attempt, innovation. The matrigengel, organoid culture kit and other products launched by the company are widely used in organoid culture, angiogenesis experiment, transwell experiment, PDX, CDX model experiment, tumor ball culture, tumor transplantation, subcutaneous tumorigenesis experiment, stem cell culture and cell differentiation research and other types of experiments to be developed.



SPF grade animal house; Temperature control throughout the production workshop to ensure product performance; ISO13485 management level production and inspection workshop; High quality products

2、Core product- Matrigengel

Product Parameter

Source: Mouse Tumor

Appearance: ① **Color:** phenol-containing red matrigengel is yellow-pink, and phenol-free red matrix gum is translucent light yellow;
② **Form:** standard matrigengel dissolved at 4°C, a transparent liquid state; High concentration matrigengel after 0°C solution, transparent liquid state, 4°C for a long time to show a semi-gel.



From left to right 1-5

Note: 1, 5 are phenol free red matrigengel placed at -80°C; 2-3 refers to the thawing time of phenolic red matrigengel at 4°C. The color of phenolic red changes due to the effect of temperature and trace carbon dioxide in the bottle. 2 refers to the thawing state of 20 minutes. 3 is thawed for 10 minutes; 4 is just fetched.

Concentration: Protein concentration ranges from 8 to 26mg/mL

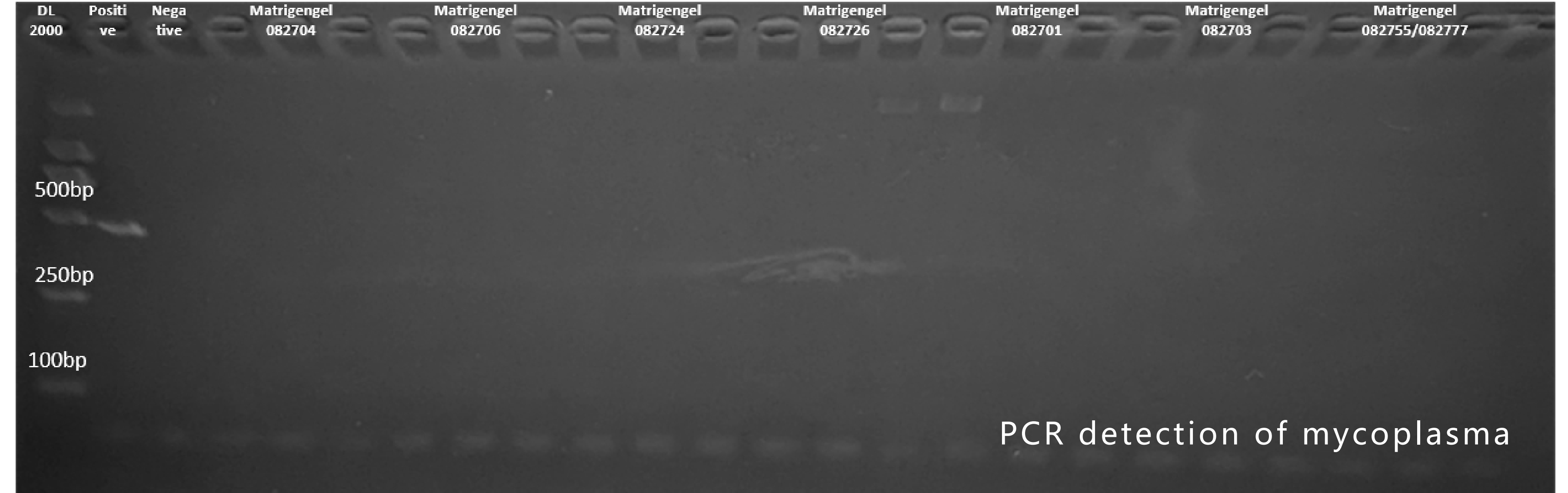
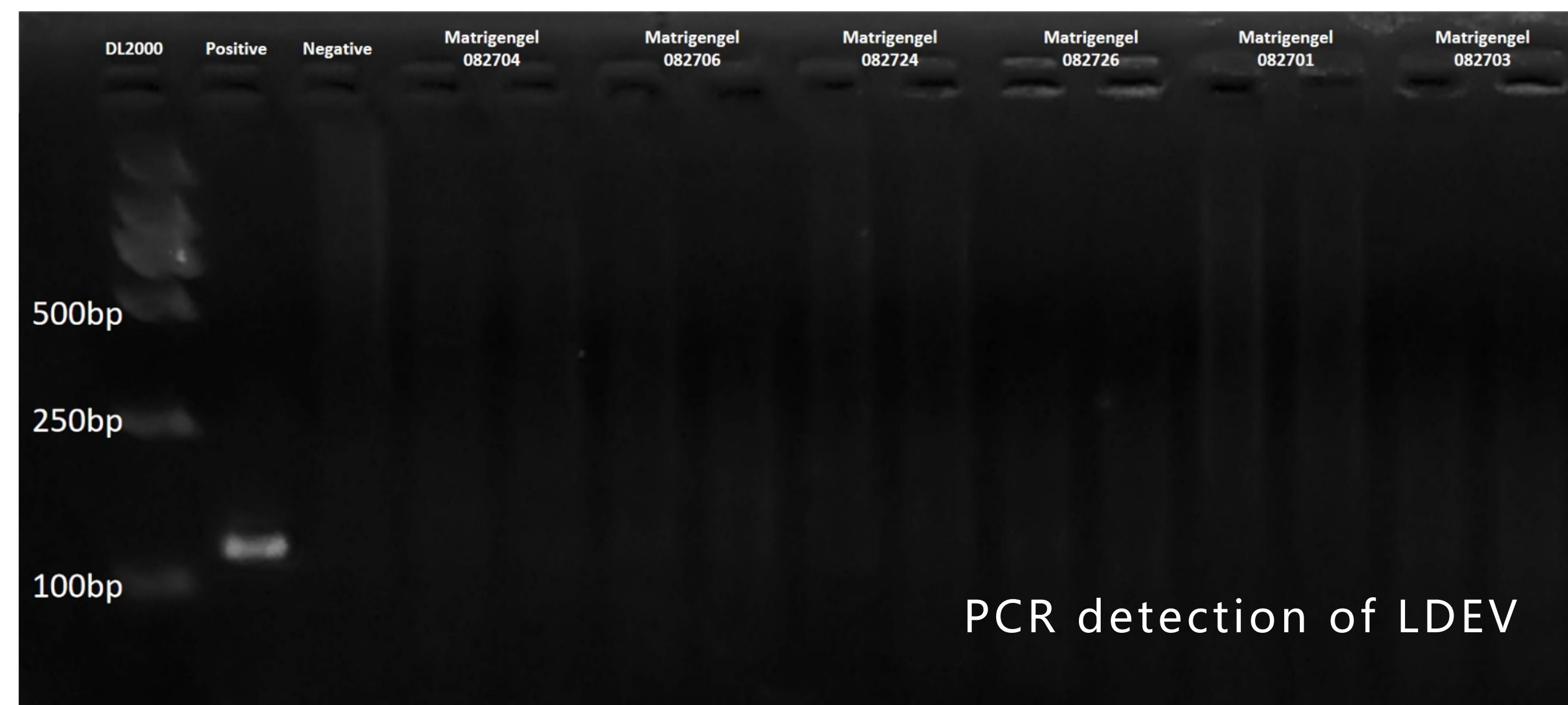
Endotoxin: ≤ 4.5EU/ mL

Gel time: 5-30min gel at room temperature, the speed of gel formation is accelerated when the temperature is from 22°C to 37°C.

2D/3D applications are very wide: Stem cell research (differentiation, maintenance), tumor research (invasion and migration, etc.), 3D cell culture (organoids, 3D cell balls), in vivo implantation (subcutaneous tumor formation, angiogenesis, embolization)

Quality Control

- Routine screening of mouse colony pathogens by mouse antibody product (MAP) tests
- Testing for bacteria, fungi and mycoplasma to ensure negative results
- Extensive PCR testing for a variety of pathogens including LDEV to ensure strict control of raw materials used in the production process
- Biological function verification of each lot (organoid culture and differentiation experiments; Subcutaneous tumor formation test; Stem cell culture; Angiogenesis experiment etc.)
- Extraction from LDEV-free mouse tumor cells
- Gel stability testing at 37°C for 14 days
- Determination of protein concentrations using BCA methods
- Detection of endotoxin levels using serological methods



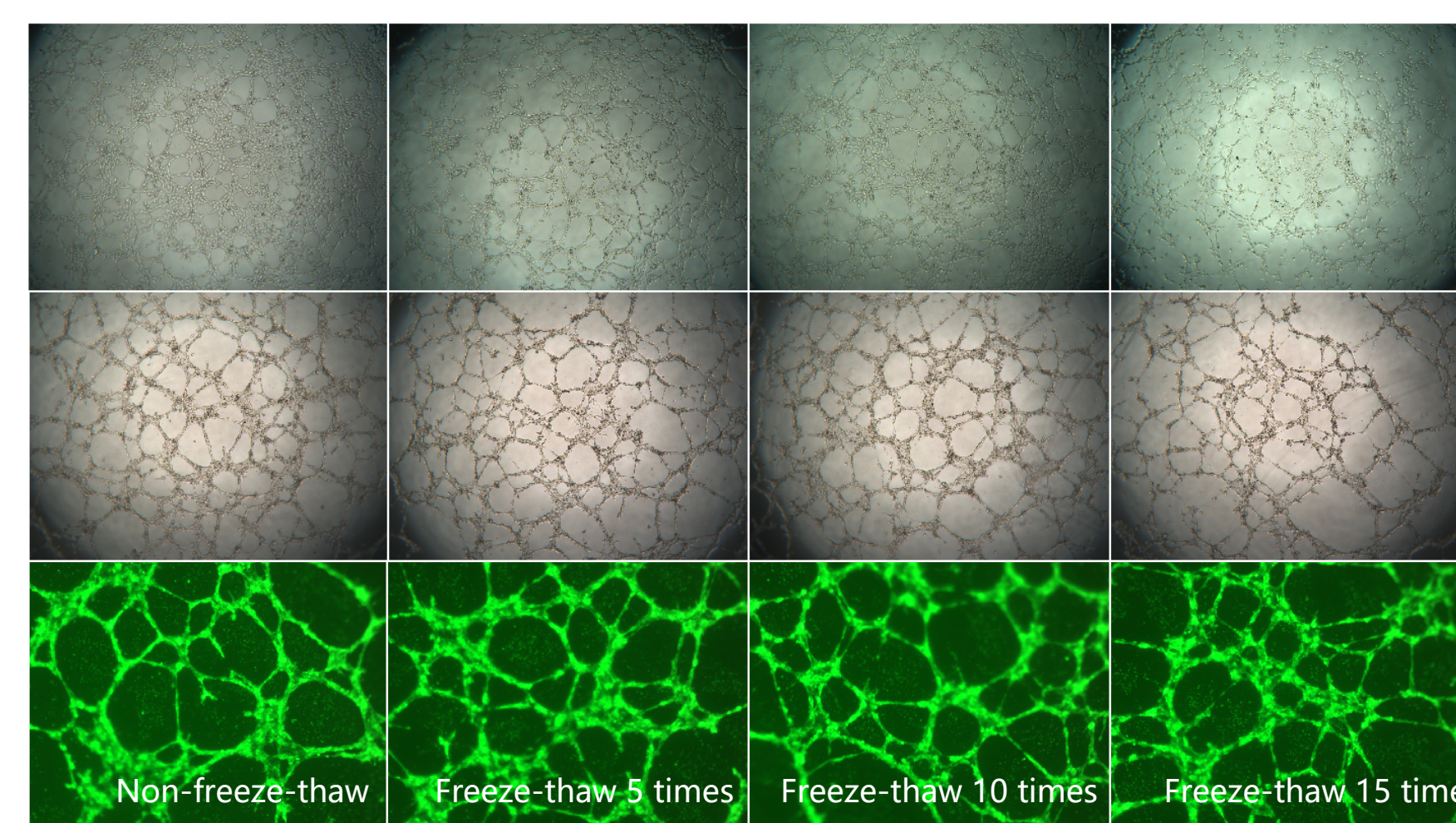
3、Performance

Permeability-Detection of impurities in matrigel



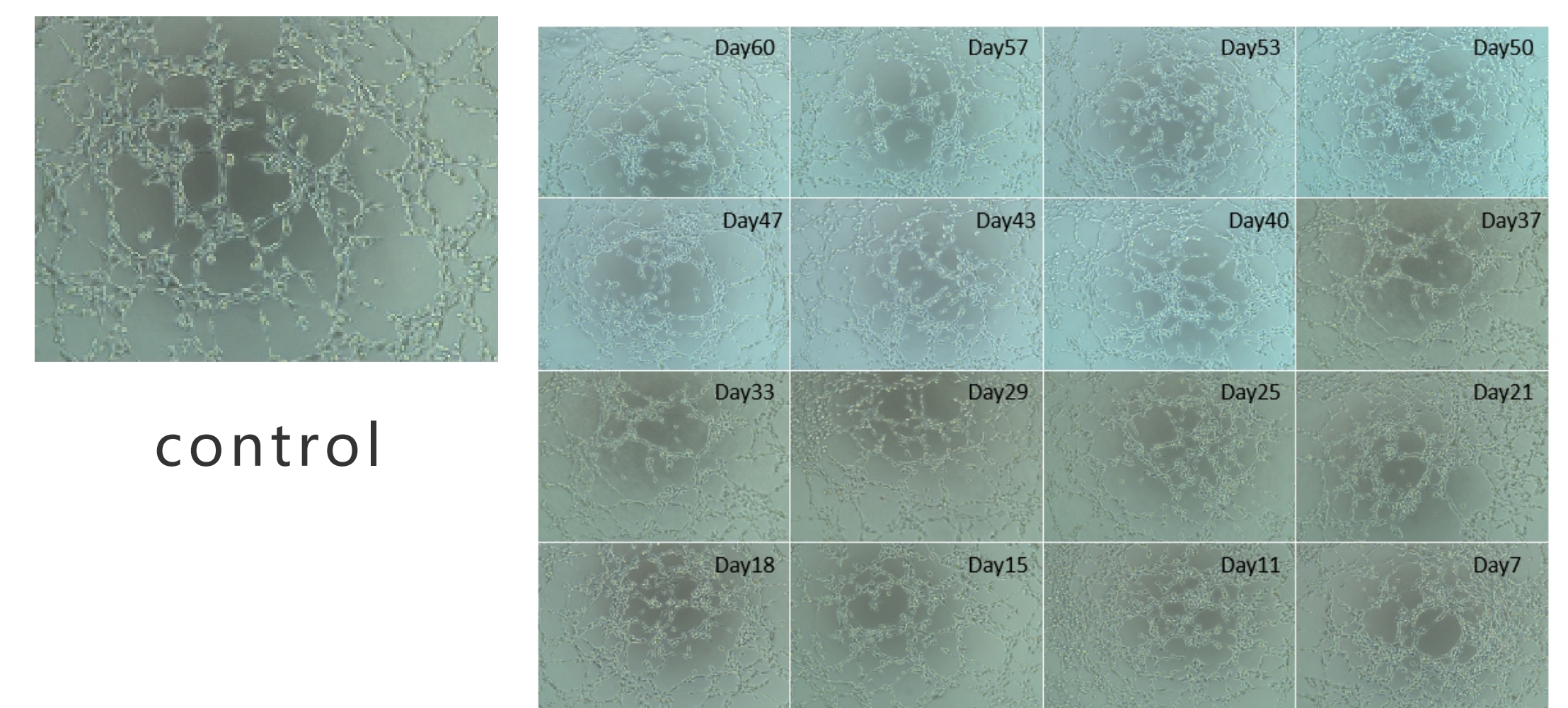
Note: There are very few impurities both in Mogengel and other brand matrigel. (High concentration)

Stability-Freeze-thaw test



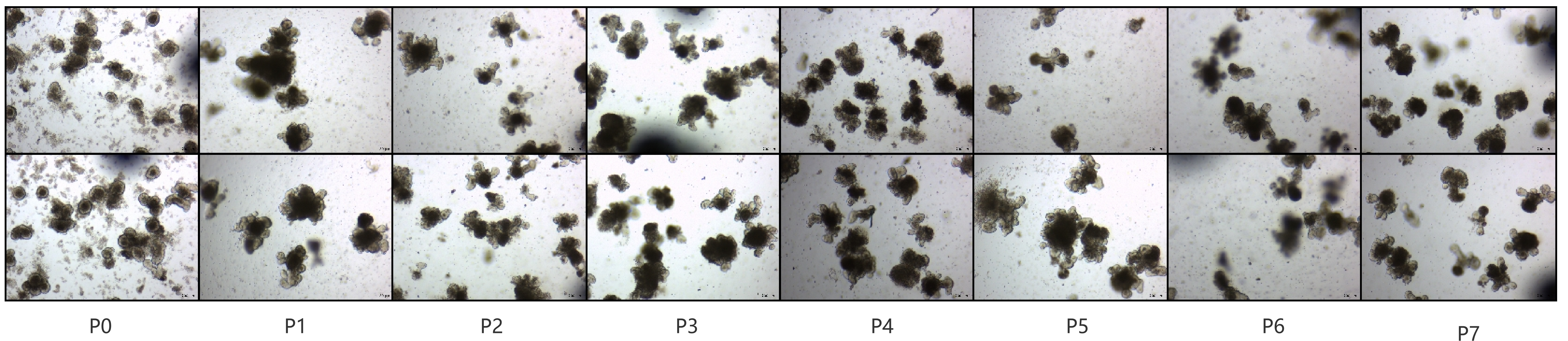
Note: Angiogenesis experiment verified the stability of matrigel after repeated freeze-thaw

Long-term stability angiogenesis results at 4°C



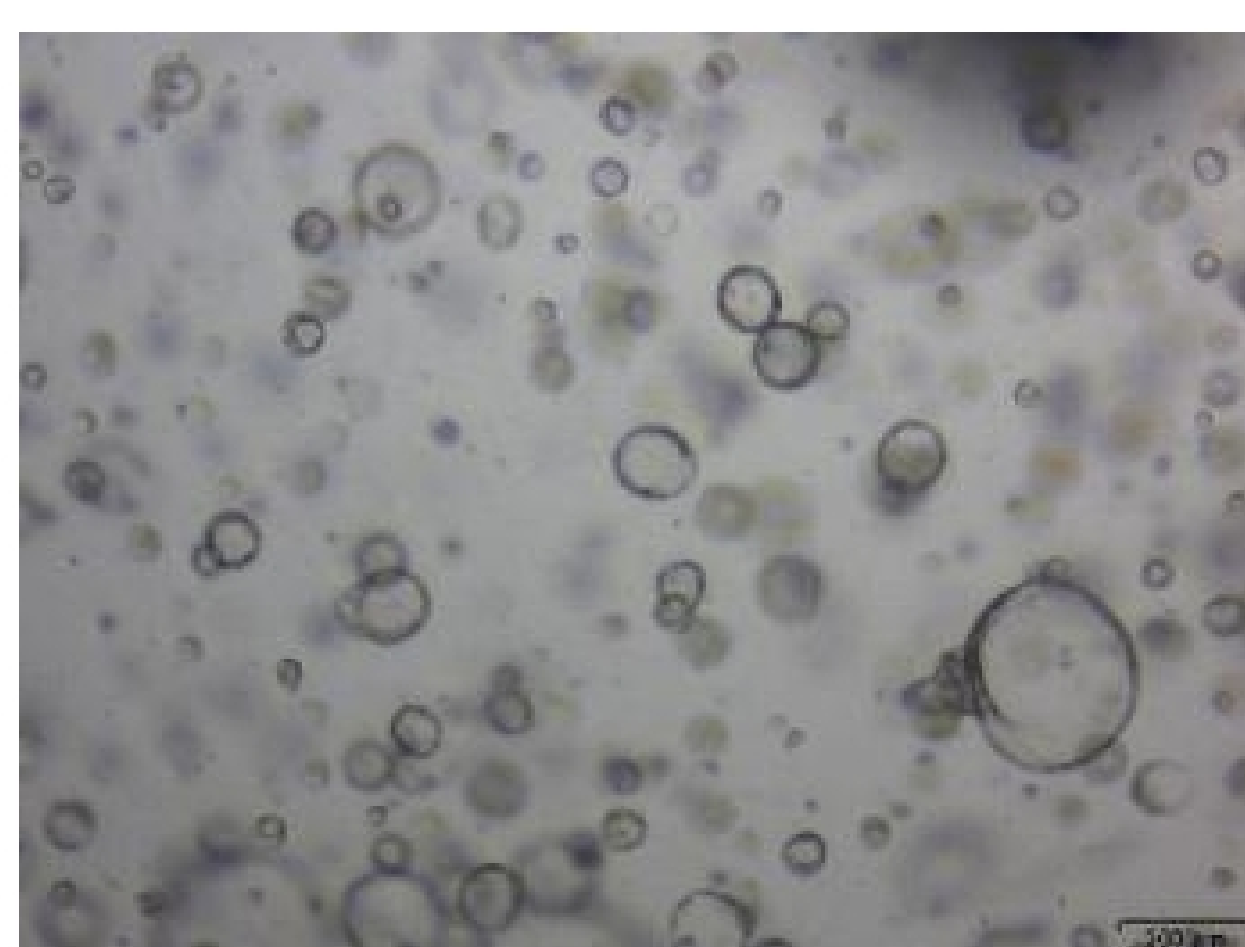
Note: Long-term stability angiogenesis results at 4°C

Organoid culture and differentiation Recommended product: 082703/082755/Organoid culture kit for mouse small intestine

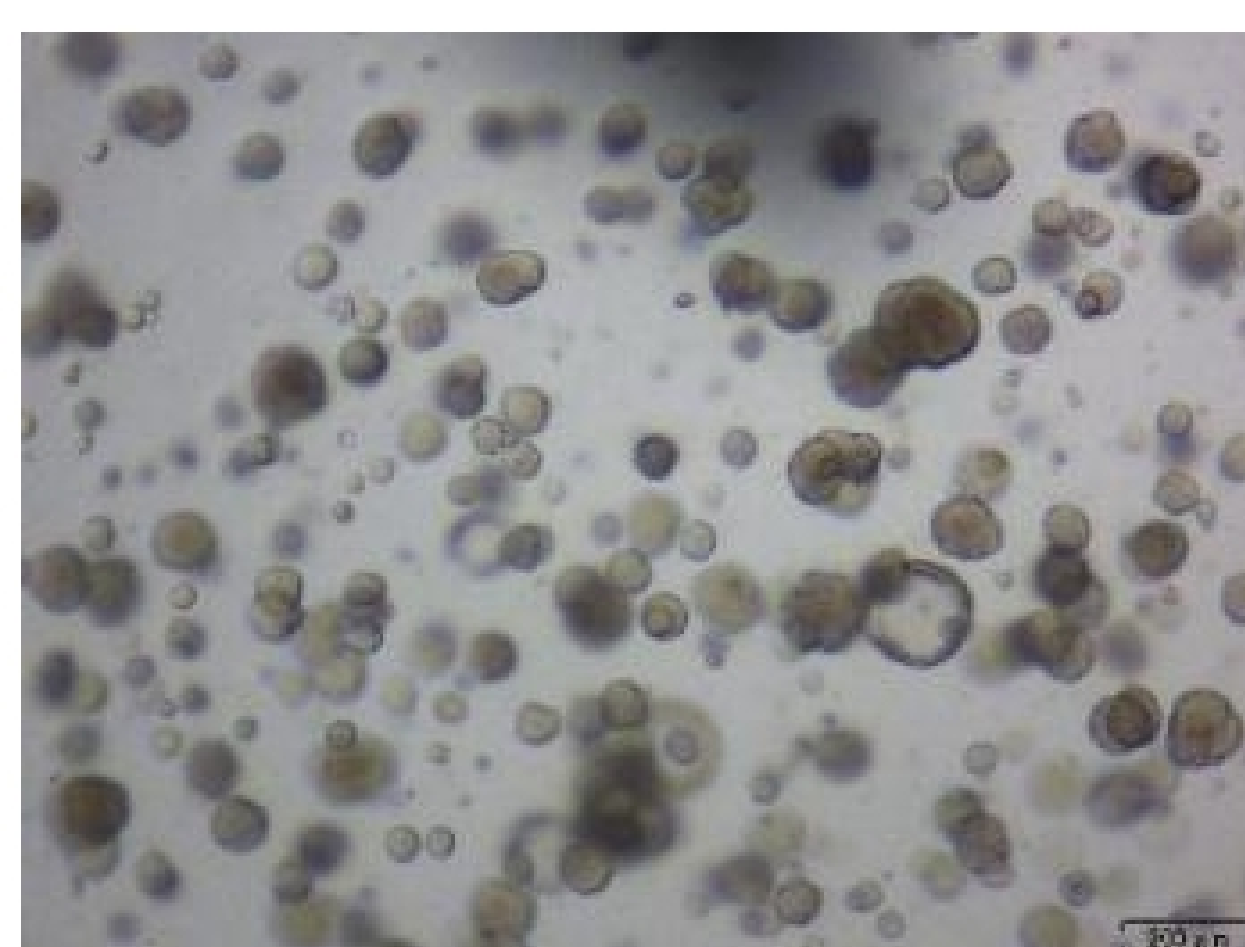


Note: Mouse small intestinal organoids are passaged continuously for 7 generations

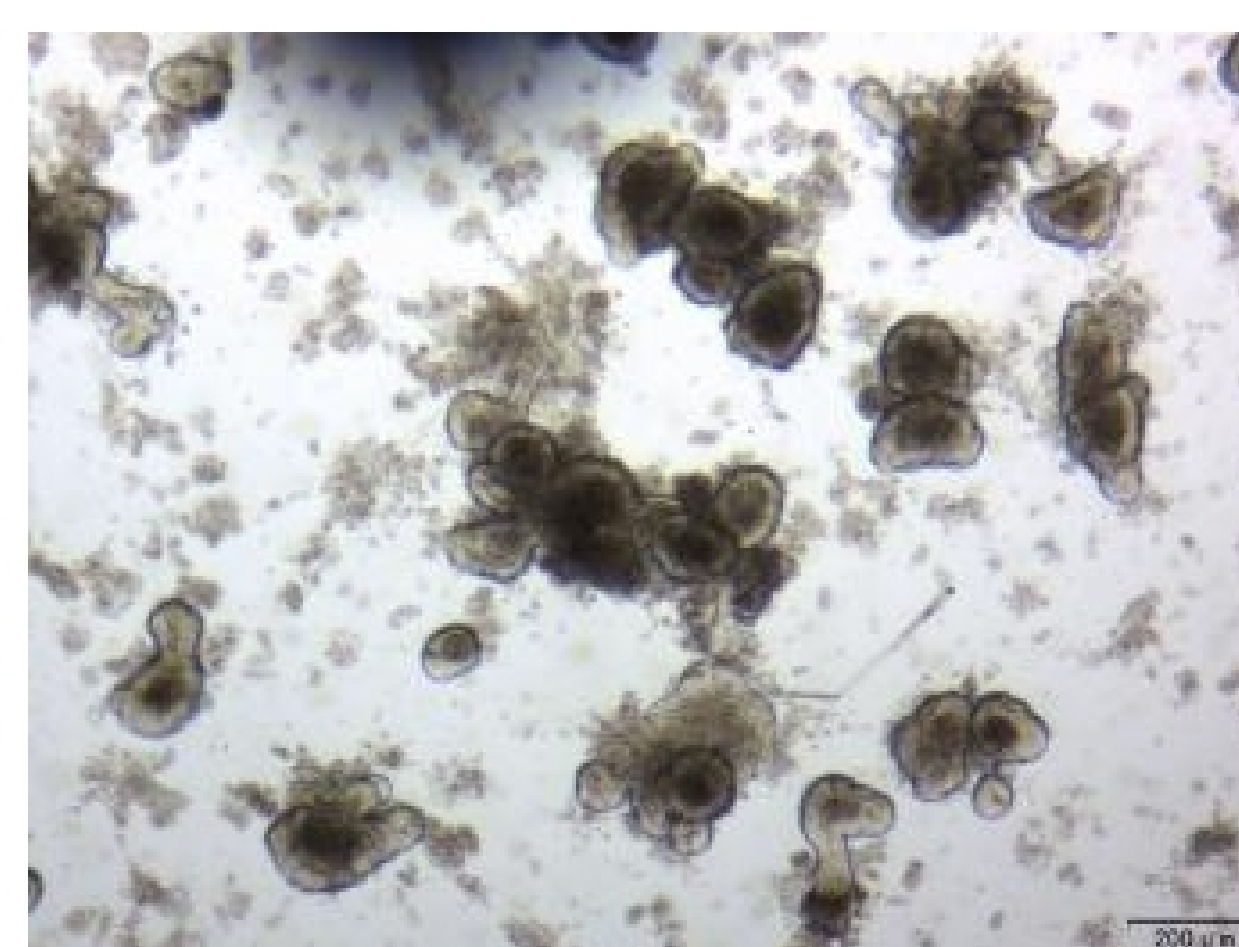
Mogengel matrigel is more supportive of organoids, and other brands of matrigel is easy to cause organoid collapse



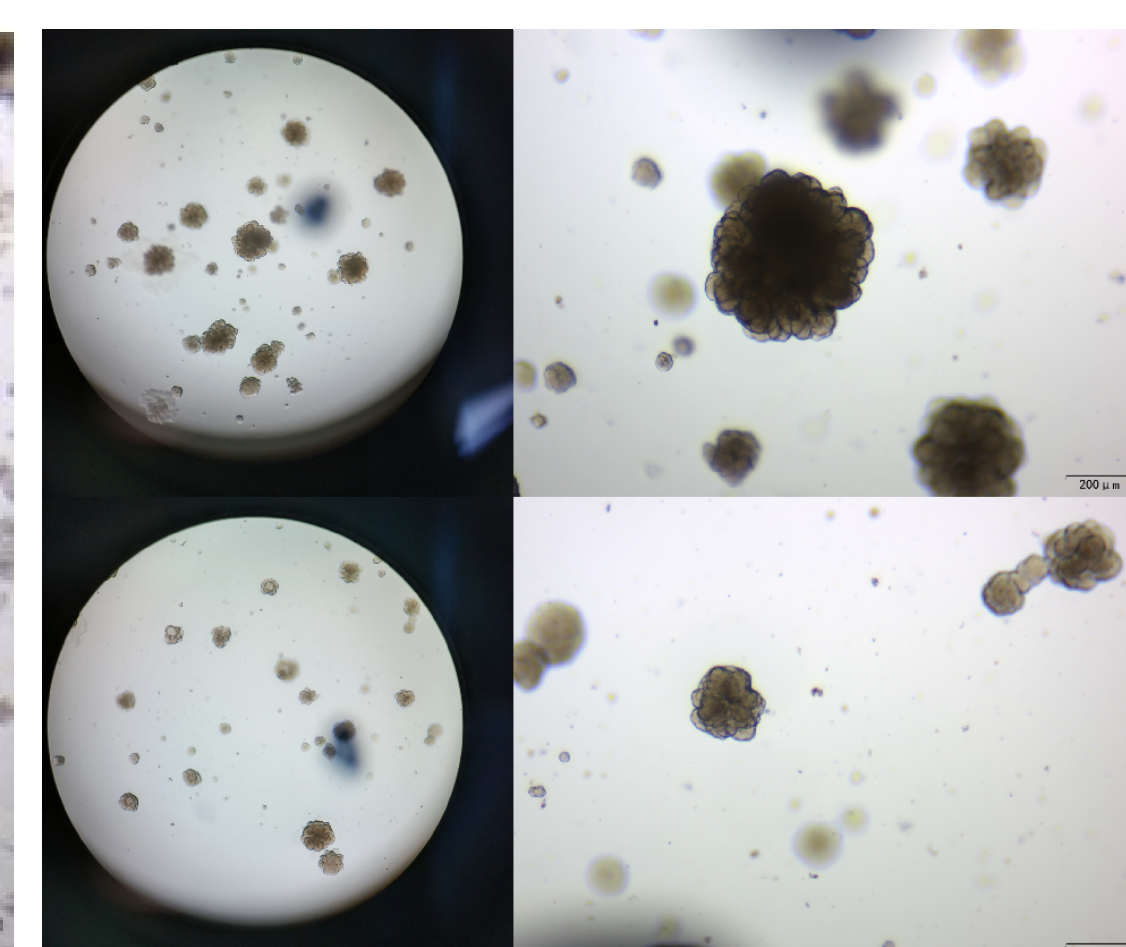
Day 4-Mouse choledochal organoid culture



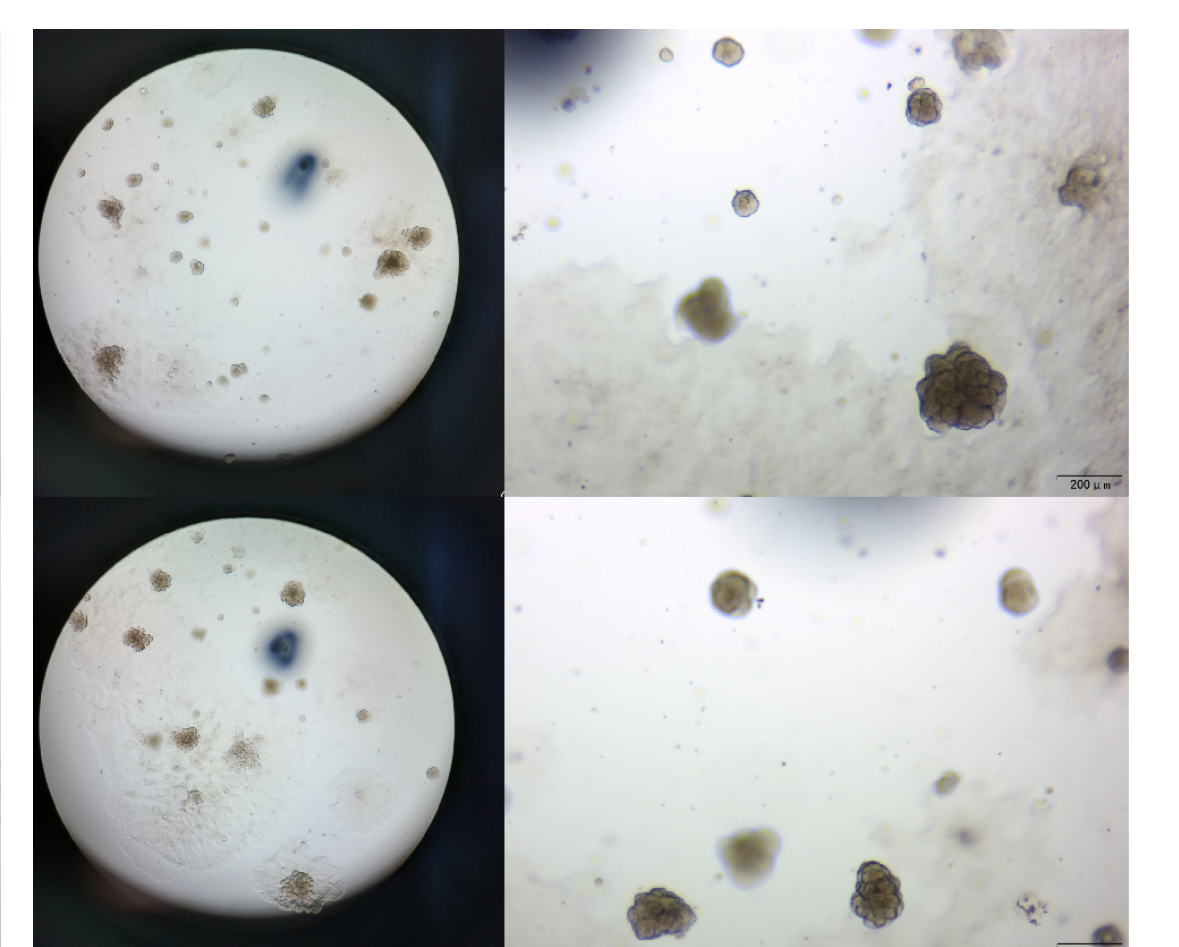
Day 4-Mouse airway epithelial organoid culture



Day 4-Mouse small intestinal organoid culture



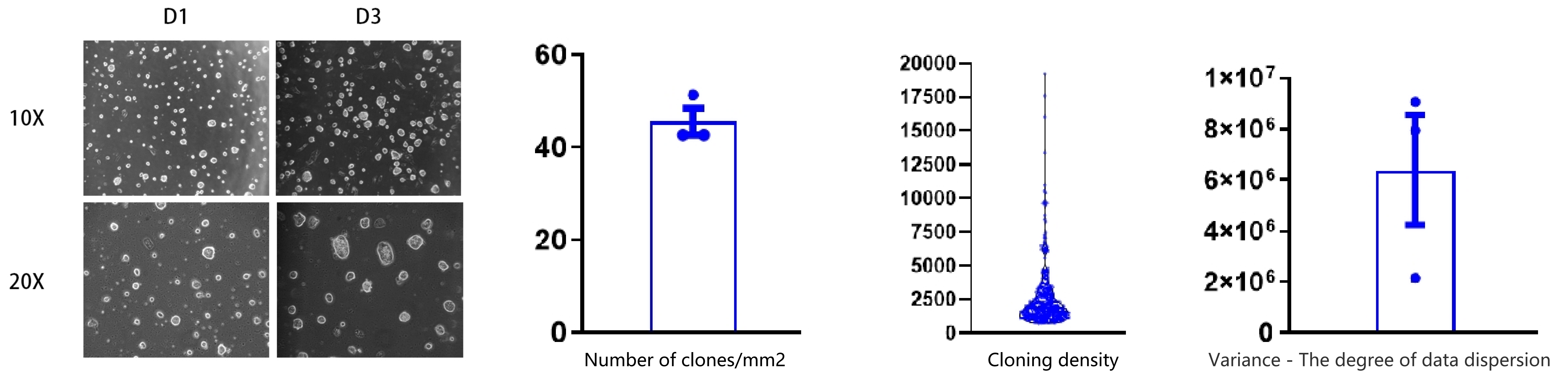
Day 6-Mogengel matrigel-Mouse airway epithelial organoids



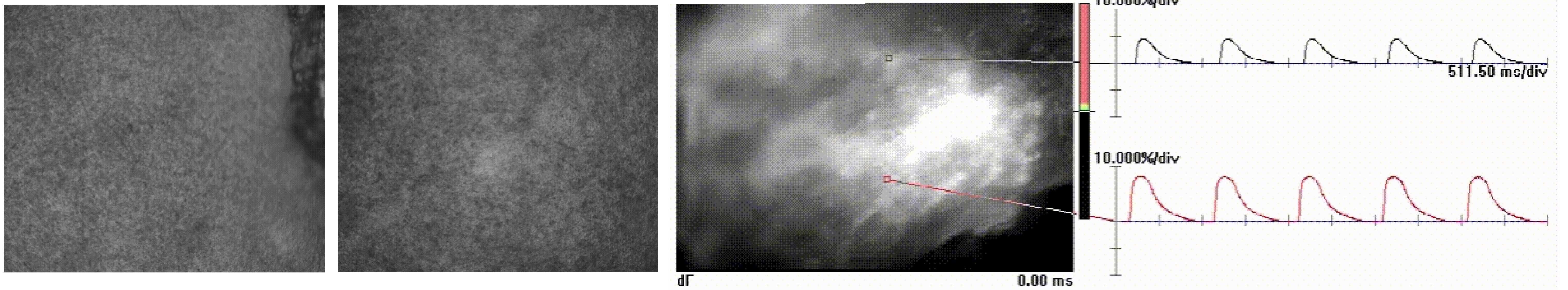
Day 6-Other Brand-Mouse airway epithelial organoids

Stem cell culture

Recommended product: 082777



Note: EPS cells are seeded onto the surface of Mogengel matrigengel, primary cloning density and clone number



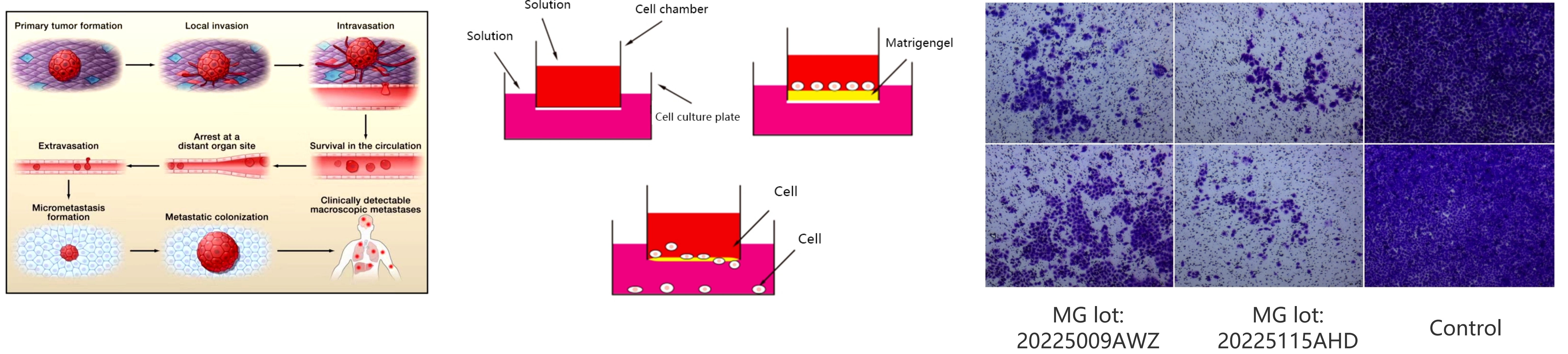
In vitro maturation culture of human cardiac microorgans (hEHT).

Functional detection when hEHT is cultured to Day14: Cursor measurement evaluates hEHT conduction function

Note: hEHT construction: See Donghui Zhang et al. Biomaterials, 2013.

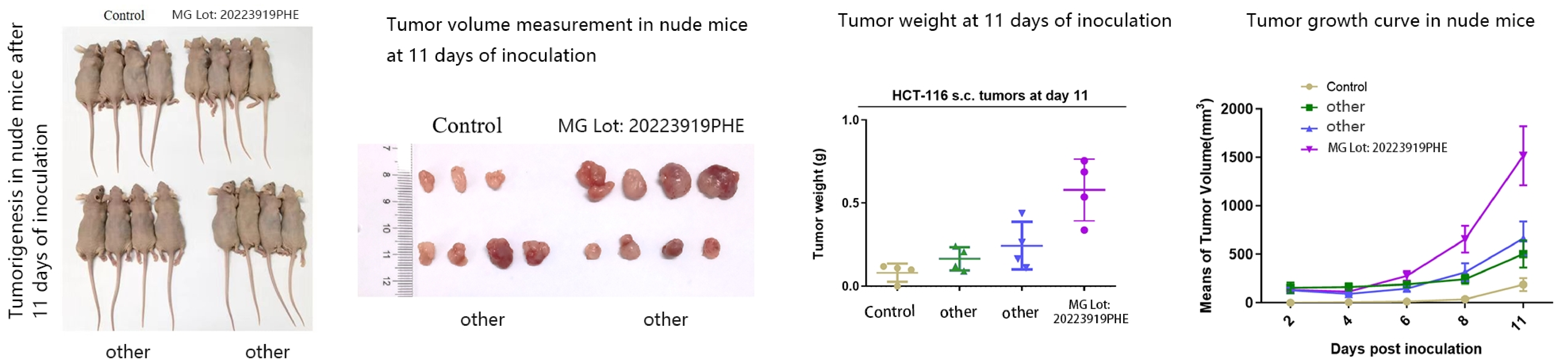
Transwell

Recommended product: 082704/082706



Subcutaneous tumorigenesis experiment

Recommended product: 082724/082726/082721/082723





4、Product Selection Guide

Types	Product Name	Art.No.	Specification	Recommended Application
Standard	Standard Star Matrigengel	082704	10mL	Cell growth, differentiation, morphological study, cytochemical function, cell migration/invasion, gene/protein expression.Protein concentration: 8-13mg/ mL
	Standard Star Matrigengel	082704S	5mL	
	Standard Star Matrigengel(no phenol red)	082706	10mL	
	Standard Star Matrigengel(no phenol red)	082706S	5mL	
Low-factor	Low-factor Star Matrigengel	082701	10mL	It is suitable for research applications where the preparation of basement membrane is highly demanding, such as the study of signal optimization of tubular bone cells. It has also been used to study gene expression in primary mouse mammalian epithelial cells (reducing background signals induced by growth factors). Protein concentration: 8-13mg/ mL
	Low-factor Star Matrigengel	082701S	5mL	
	Low-factor Star Matrigengel(no phenol red)	082703	10mL	
	Low-factor Star Matrigengel(no phenol red)	082703S	5mL	
High Concentration	High Concentration Star Matrigengel	082724	10mL	Tumor experiment, in-vivo angiogenesis experiment, gel embolization experiment
	High Concentration Star Matrigengel	082724S	5mL	
	High Concentration Star Matrigengel(no phenol red)	082726	10mL	
	High Concentration Star Matrigengel(no phenol red)	082726S	5mL	
	High Concentration Low-factor Star Matrigengel(with phenol red)	082721	10mL	
	High Concentration Low-factor Star Matrigengel(with phenol red)	082721S	5mL	
	High Concentration Low-factor Star Matrigengel(no phenol red)	082723	10mL	
	High Concentration Low-factor Star Matrigengel(no phenol red)	082723S	5mL	
Stem Cell	IPS-Verified Star Matrigengel	082777	10mL	Stem cell cultures, such as hESC,iPSC, provide the repeatability and consistency required for trophoblastic cultures of human embryonic stem cells and induced pluripotent stem cells.
		082777S	5mL	
Organoid	Organoid-Star Matrigengel	082755	10mL	Organoid culture, as the scaffold of three-dimensional organoid culture, supports and nourishes organoid growth. For example, mice intestinal organs, lung organs, human brain organs and so on. Protein concentration: 8-13mg/ mL
		082755S	5mL	

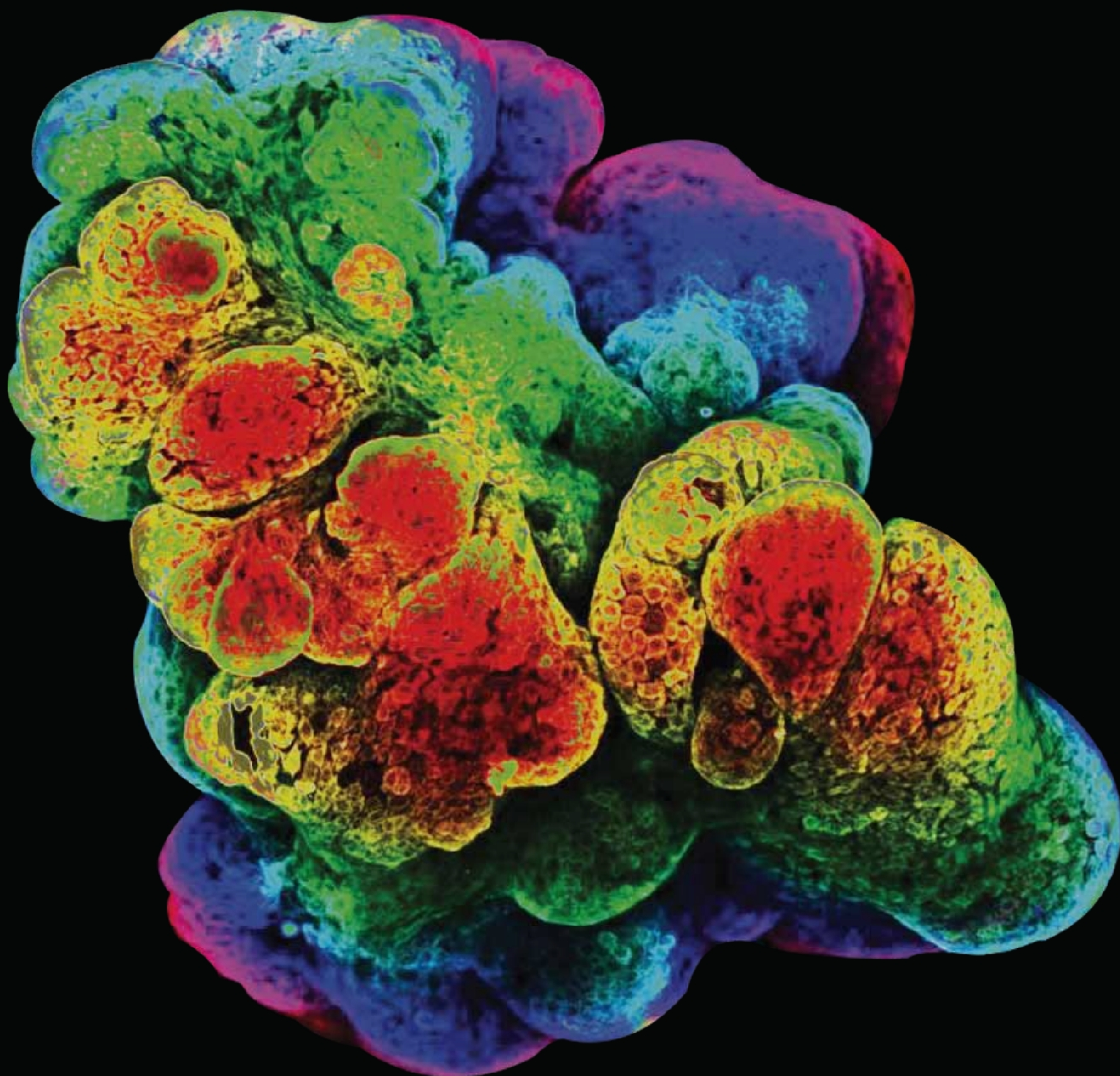
Organoid Kit	Art.No.
Colorectal Cancer Organoid Kit	MA-0807T001L
	MA-0807T001S
Lung Adenocarcinoma Organoid Kit	MA-0807T002L
	MA-0807T002S
Lung Squamous Cell Carcinoma Organoid Kit	MA-0807T003L
	MA-0807T003S
Small Cell Lung Cancer Organoid Kit	MA-0807T004L
	MA-0807T004S
Ovarian Cancer Organoid Kit	MA-0807T005L
	MA-0807T005S
Cervical cancer Organoid Kit	MA-0807T006L
	MA-0807T006S
Endometrial Cancer Organoid Kit	MA-0807T007L
	MA-0807T007S
Gastric Cancer Organoid Kit	MA-0807T008L
	MA-0807T008S
Hepatocellular Carcinoma Organoid Kit	MA-0807T009L
	MA-0807T009S
Cholangiocarcinoma Organoid Kit	MA-0807T010L
	MA-0807T010S
Breast Cancer Organoid Kit	MA-0807T011L
	MA-0807T011S
Pancreatic Cancer Organoid Kit	MA-0807T012L
	MA-0807T012S
Head and Neck Squamous Cell Carcinoma Organoid Kit	MA-0807T013L
	MA-0807T013S
Human Esophageal Cancer	MA-0807T014S
	MA-0807T014L

Organoid Kit	Art.No.
Human Colonic Organoid Kit	MA-0817H001L
	MA-0817H001S
Human Intestinal Organoid Kit	MA-0817H002L
	MA-0817H002S
Human Gastric Organoid Kit	MA-0817H003L
	MA-0817H003S
Human Airway Organoid Kit	MA-0817H004L
	MA-0817H004S
Mouse Airway Organoid Kit	MA-0817H005L
	MA-0817H005S
Mouse Intestinal Organoid Kit	MA-0817H006L
	MA-0817H006S
Human Liver Ductal organoid Kit	MA-0817H008DL
	MA-0817H008DS
	MA-0817H008HL
	MA-0817H008HS
Mouse Ductal Organoid Kit	MA-0817H009DL
	MA-0817H009DS
	MA-0817H009HL
	MA-0817H009HS
Mouse Colonic Organoid Kit	MA-0817H007L
	MA-0817H007S
Pig Small Intestines	MA-0817H010S
	MA-0817H010L

Others	Art.No.
Organoids digestive solution	MB-0818L01L
	MB-0818L01S
Organoid cryopreservation solution	MB-0818L02L
	MB-0818L02S
Organoid culture lotion	MB-0818L03L
	MB-0818L03S

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