

**MSC Serum Free Media (Adipose-Primary Cell Separation and Subculturing)**

Nomenclature	Specification	Cat No.	Brief description of use	Expiry date
MSC Serum Free Basal Medium	500 mL/vial	NC0103	5 mL NC0104.S is added to 500 mL NC0103 for primary cell separation and subculturing of ADSCs.	2- 8°C, 12 months
MSC Serum Free Medium Supplement 3 (Adipose-Primary Cell Separation and Subculturing)	5 mL/vial	NC0104.S		-20°C, 12 months

**Stem Cell Digestion Products**

Nomenclature	Specification	Cat No.	Brief description of use	Expiry date
Adipose tissue digestive enzyme	100 mL/vial	NC1005	Specially used for the digestion of adipose tissues to separate primary ADSCs.	2- 8°C, 12 months
Stem Cell Mild Digestive Enzyme	500 mL/vial	NC1004.1	It is specially used for stem cell digestion, has mild effect and can improve the cell viability.	2- 8°C, 12 months

**Stem Cell Cryopreserved Products**

Nomenclature	Specification	Cat No.	Brief description of use	Expiry date
Serum Free Cell Cryopreservation Media	100 mL/vial	NC1001.1	It supports storage of high-density cryopreserved stem cells and immune cells.	2- 8°C, 12 months
GMP Cell Cryopreservation Media	100 mL/vial	NC1010	It supports storage of high-density cryopreserved stem cells and immune cells. No protein, no DMSO, pharmaceutical injection grade drug substance, higher safety.	2- 8°C, 12 months

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**YOCON 友康®**

Not only for performance, but focus more on safety

# MSC Serum Free Media

(Adipose-Primary Cell Separation and Subculturing)

US FDA Class II Medical Device Registration No. 510(K): K190983  
NMPA Pharmaceutical Excipients Registration No.: F20190000508

**Stable passage up to 20 generations**

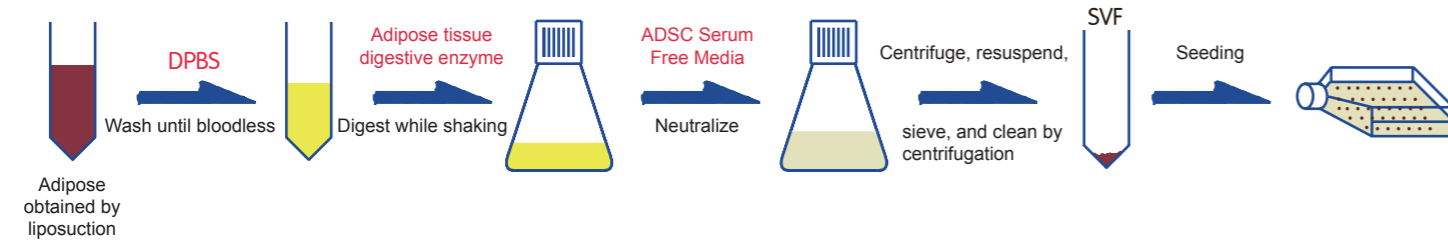


**The MSC Serum Free Media have passed biocompatibility and toxicity tests  
Powerfully support IND application and clinical studies**

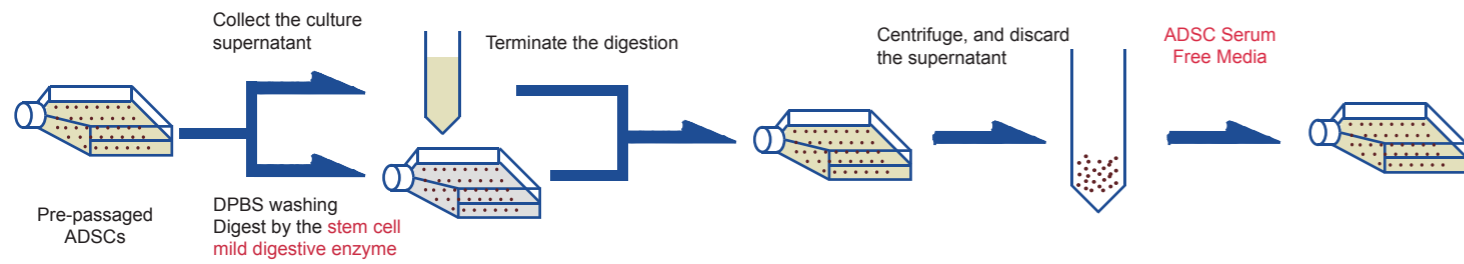
## Brief Process

If you do not know how to culture the cells, it does not matter. Yocon Biology will provide you with a complete culture solution.

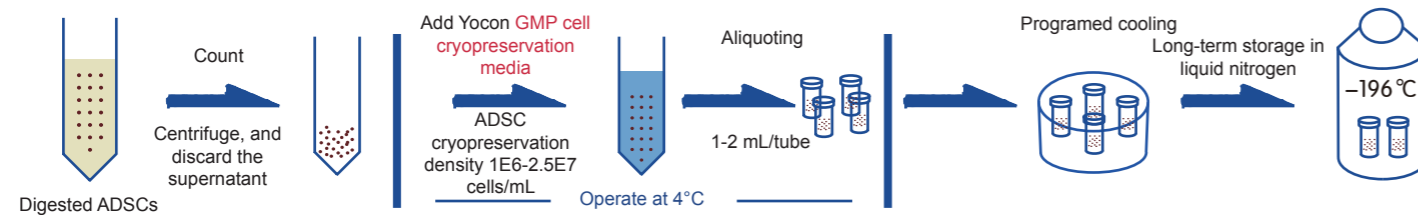
### Adipose tissue (alcohol digestion method) → SVF → seeding



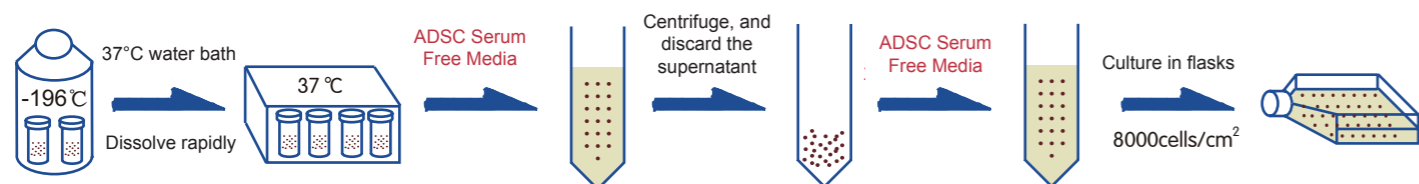
### ADSC passaging



### ADSCs cryopreservation



### ADSCs cryopreservation



## ADSCs culture

The media can be used for primary cell separation and subculturing of ADSCs, and can be stably passaged to 20 generations.

### Primary

4.5×10<sup>6</sup> primary ADSCs can be obtained from 10 mL adipose tissue.

There were primary cells grew adherently after 48 h. Primary cells can be harvested after 6-8 days.

### Passaging

Total harvested P3 cells 1550×10<sup>7</sup>.

Total harvested P5 cells 318000×10<sup>7</sup>.



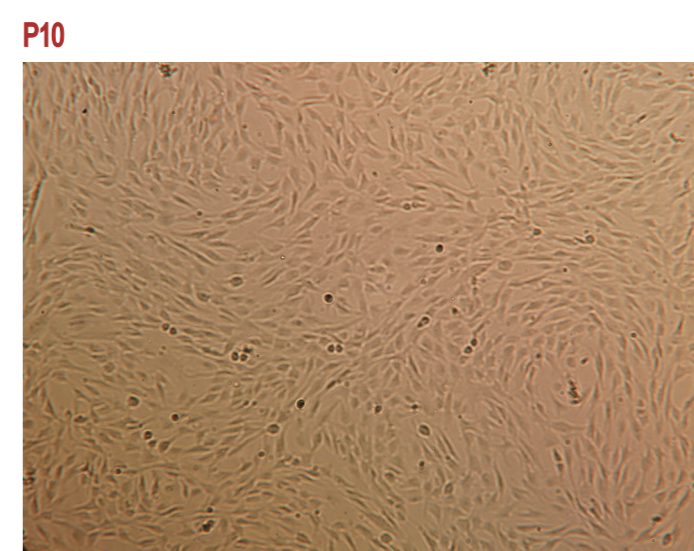
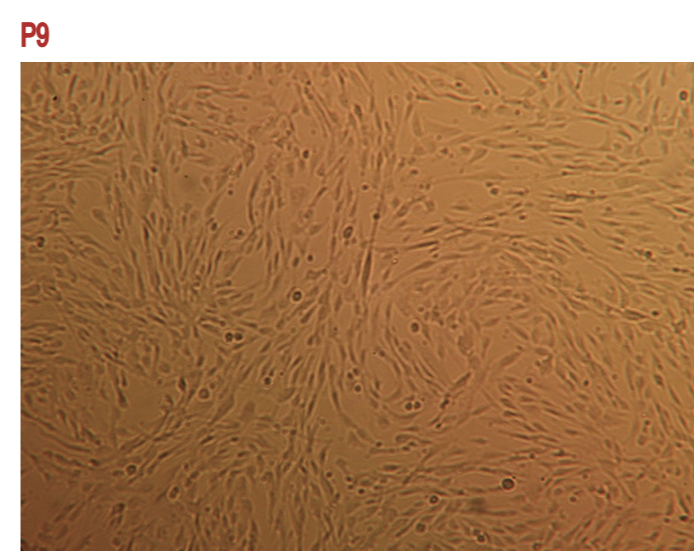
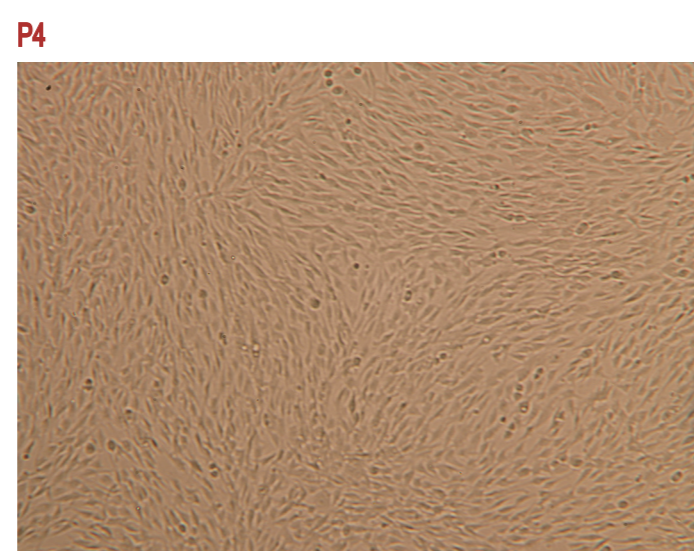
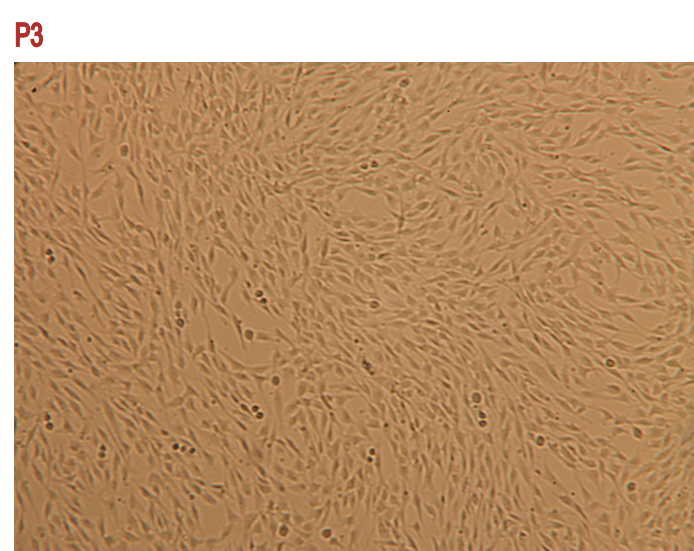
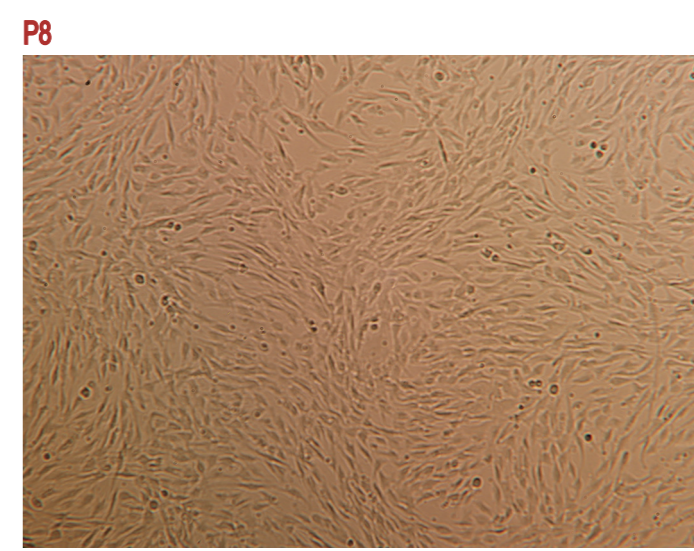
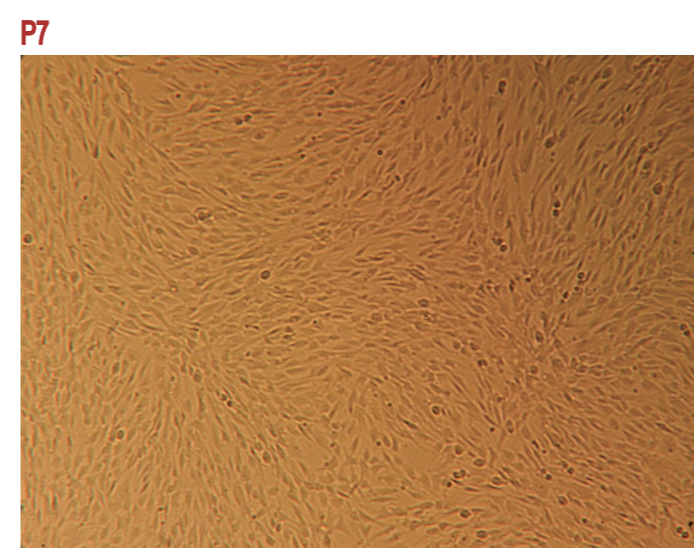
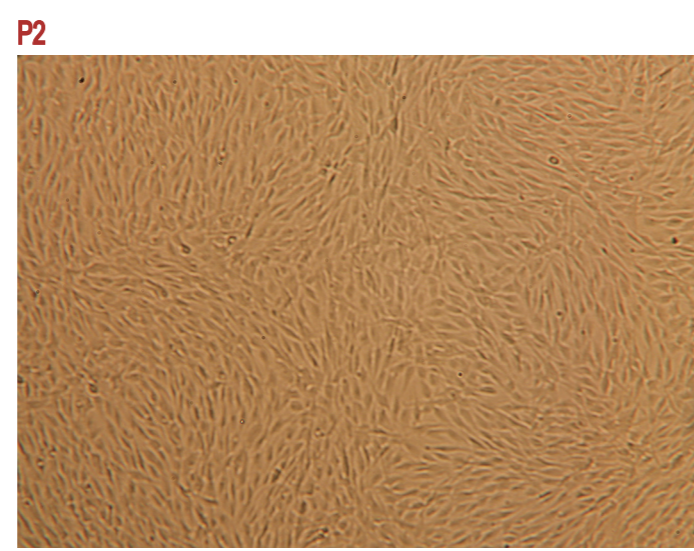
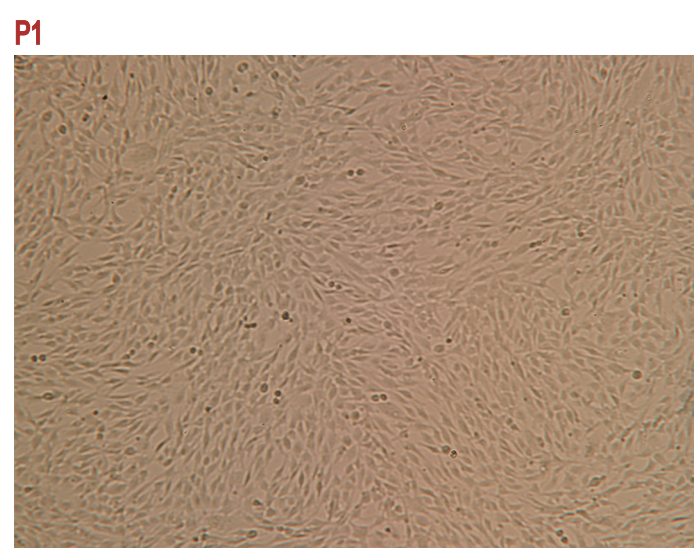
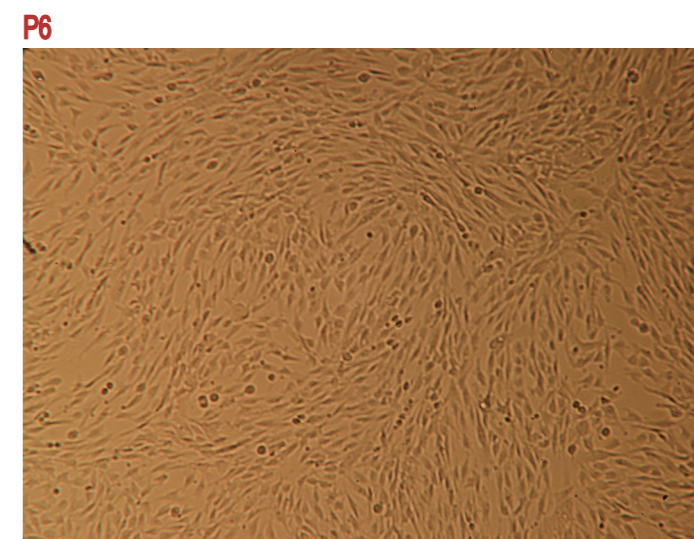
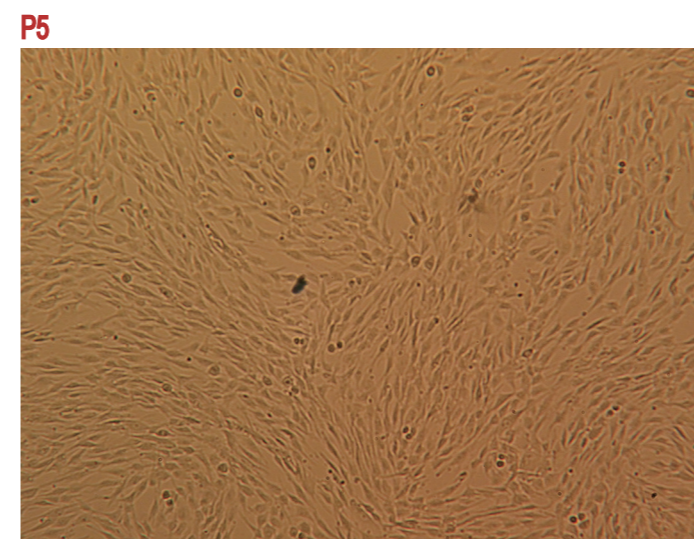
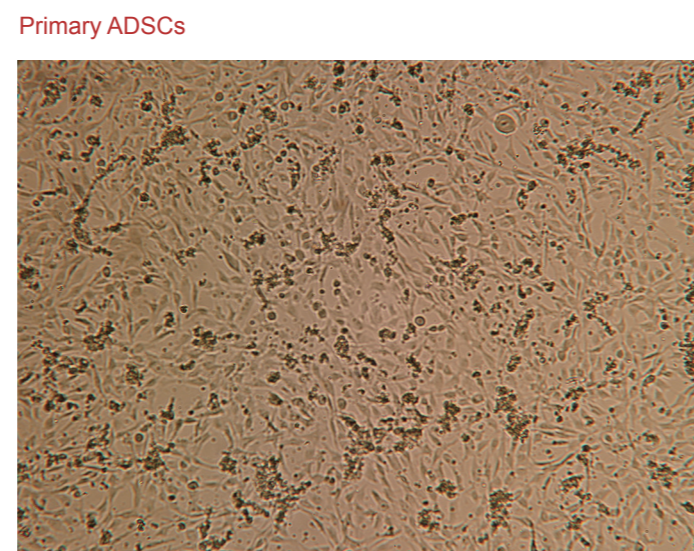
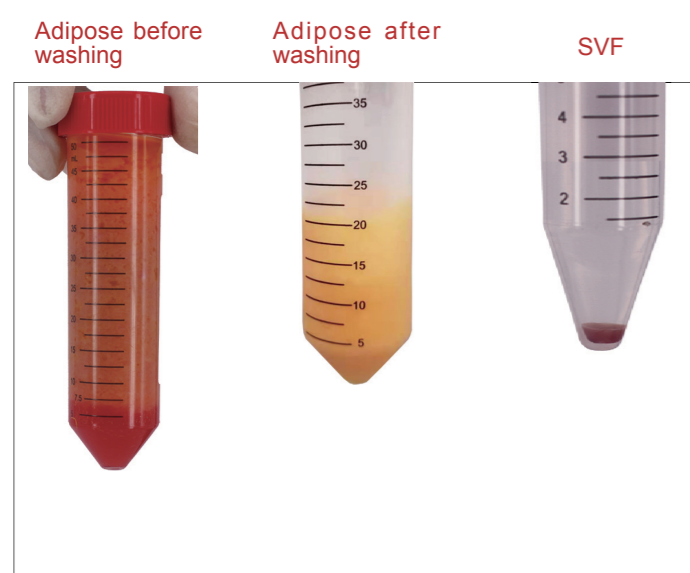
### [Serial Passage Data]

The following data was obtained from serum free medium and adipose tissue digestive enzymes by Yocon Biology adipose separation technique.

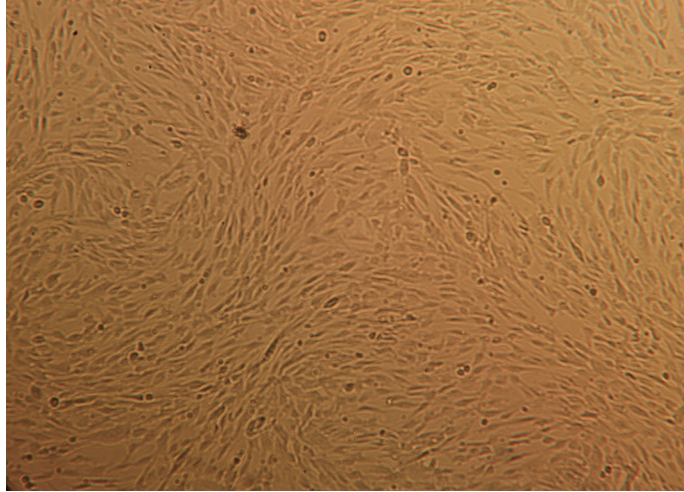
Different adipose samples and different separation techniques may lead to significant differences in results. \*

Passage	Seeding density (pcs/cm <sup>2</sup> )	Time	Confluence	Number of harvested cells (pcs)/T25	Amplification factor	Total harvested cells (pcs)
Primary	-	Days 6 to 8	-	4.5E6	-	4.5E6
P1	8000	72h	80% ~90%	2.80E6	14.02	6.31E+07
P2				3.47E6	17.33	109E+07
P3				2.83E6	14.15	1550E+07
P4				3.10E6	15.51	24000E+07
P5				2.65E6	13.24	318000E+07
P6				2.58E6	12.89	4100000E+07
P7				2.63E6	13.17	53900000E+07
P8				2.40E6	12.02	649000000E+07
P9				2.51E6	12.55	8140000000E+07
P10				1.89E6	9.45	76900000000E+07
P11				1.98E6	9.90	761000000000E+07
P12				1.56E6	7.82	5950000000000E+07
P13				1.53E6	7.66	45600000000000E+07
P14				1.40E6	7.00	319000000000000E+07
P15				1.47E6	7.33	2340000000000000E+07
P16				1.49E6	7.43	17400000000000000E+07
P17				1.54E6	7.68	133000000000000000E+07
P18				1.41E6	7.03	938000000000000000E+07
P19				1.47E6	7.37	6920000000000000000E+07
p20		96h		1.46E6	7.29	5040000000000000000E+07

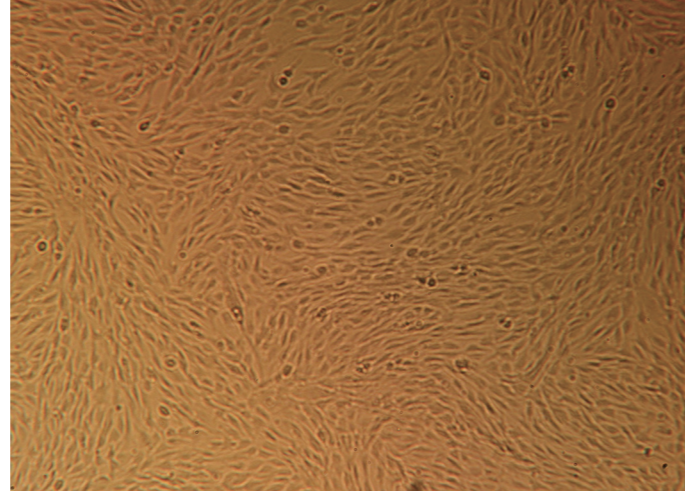
# Cell morphology



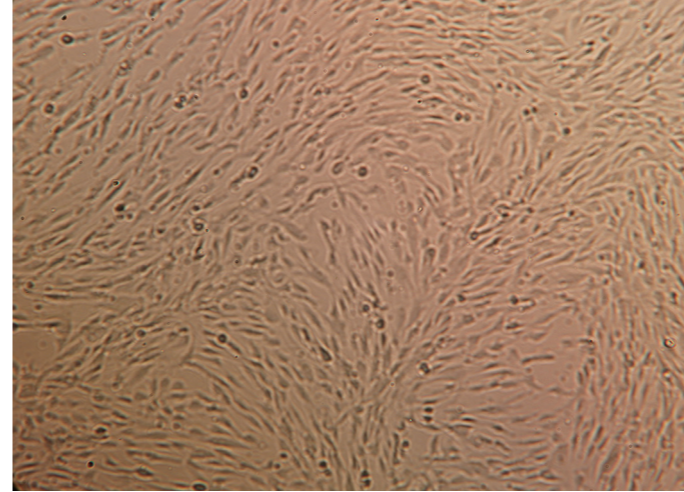
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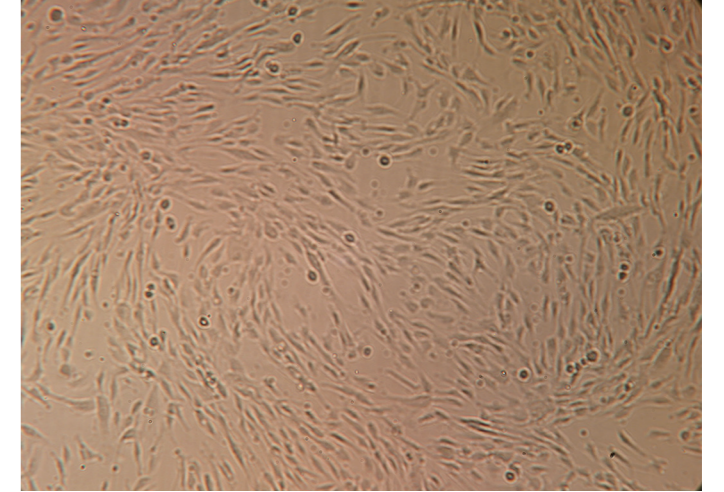
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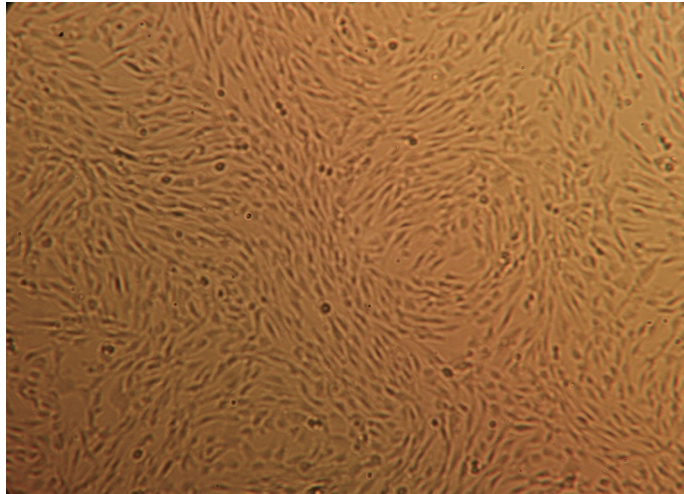
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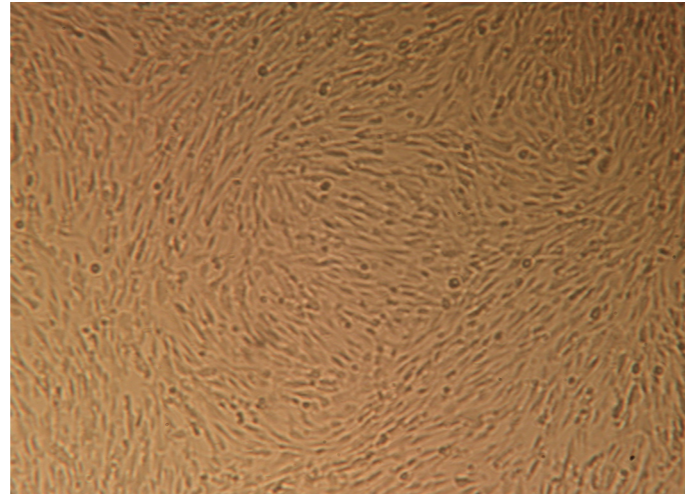
P18



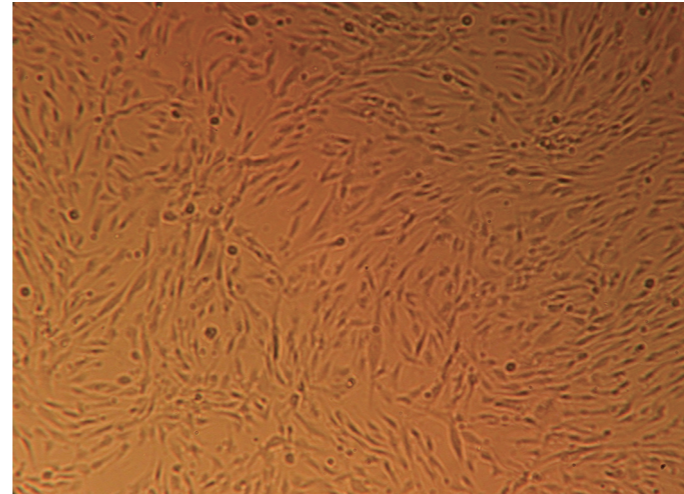
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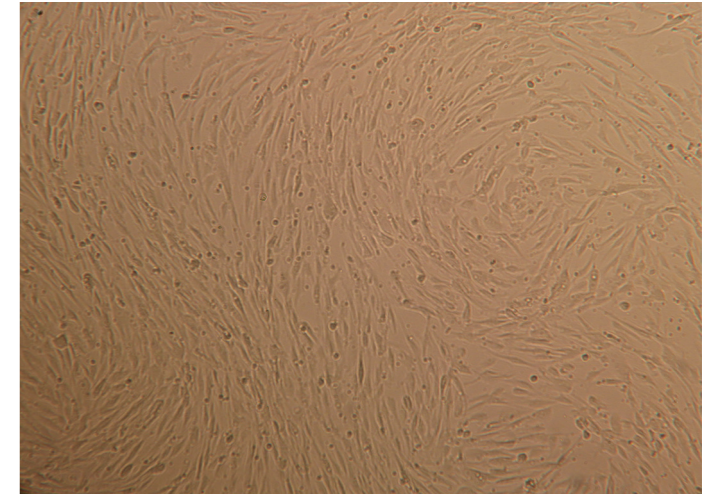
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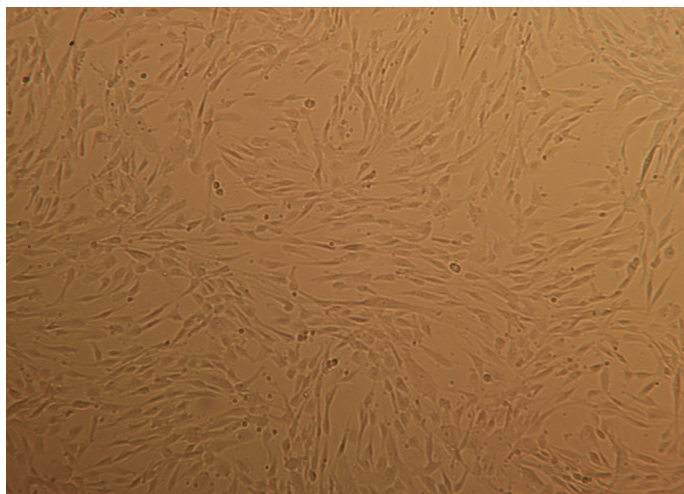
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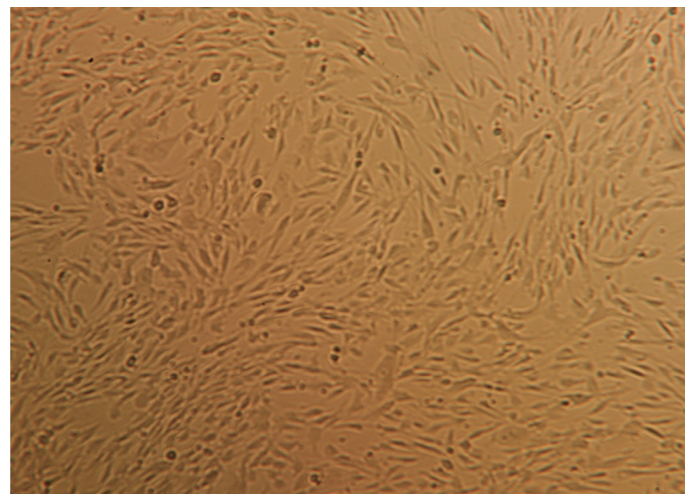
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P15

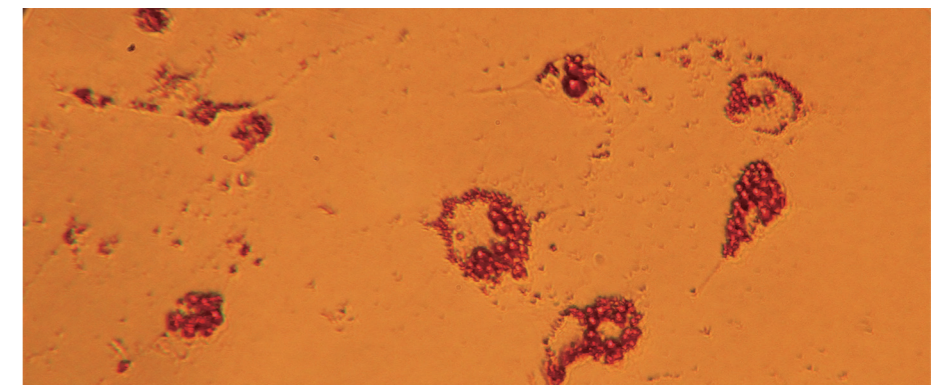


P16

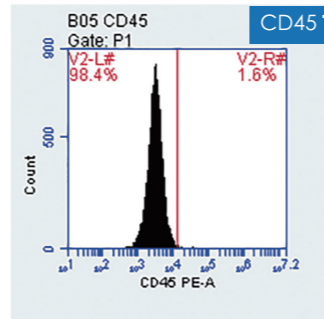
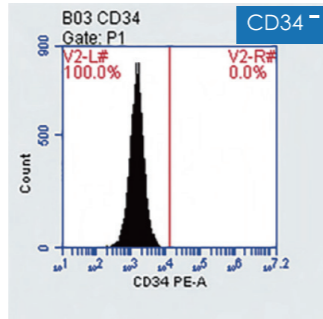
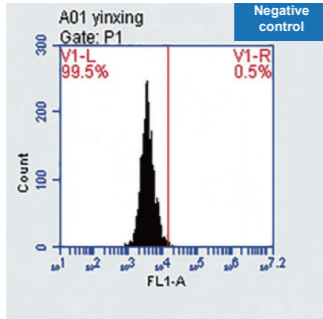


Induced  
differentiation

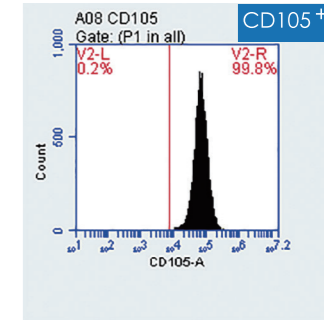
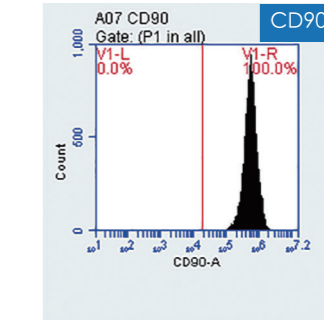
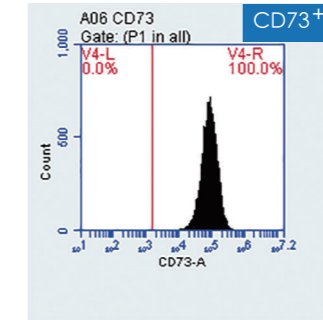
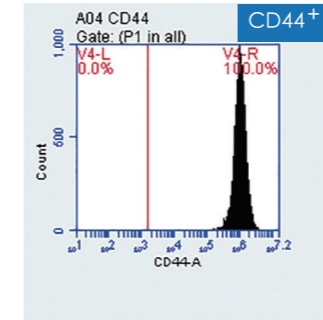
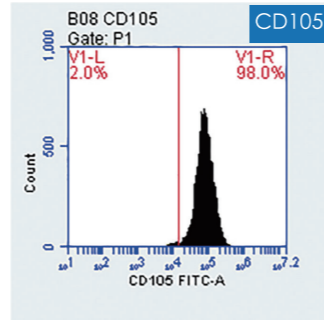
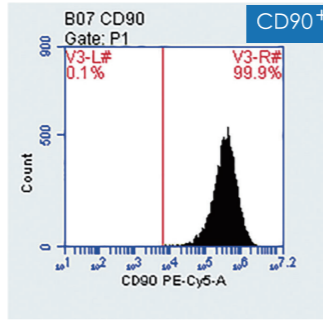
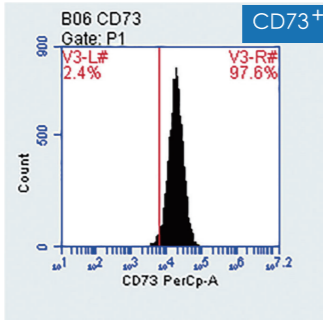
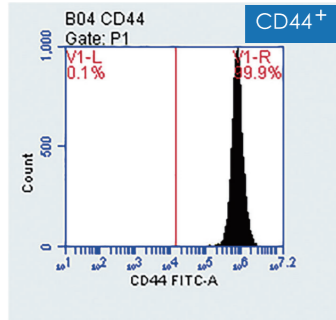
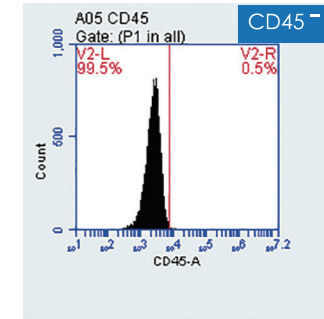
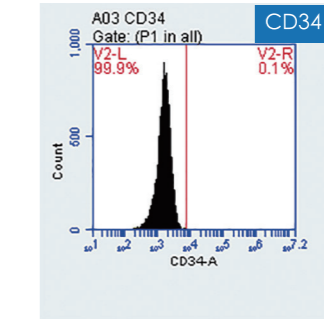
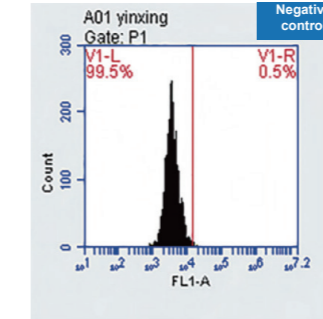
Induced adipogenesis  
(Oil Red staining)



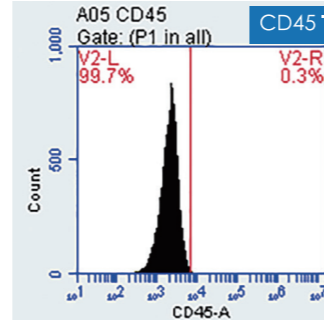
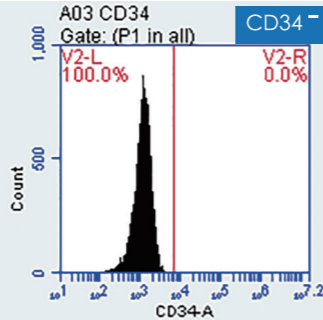
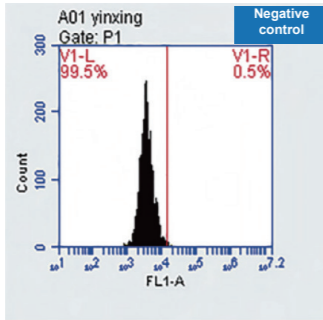
### P3 Phenotyping



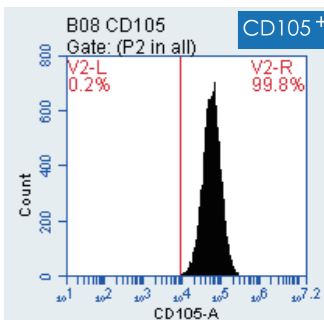
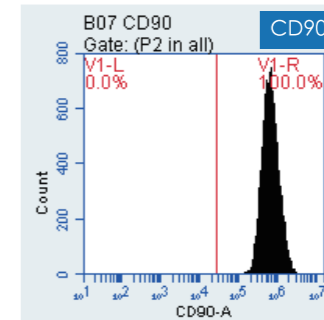
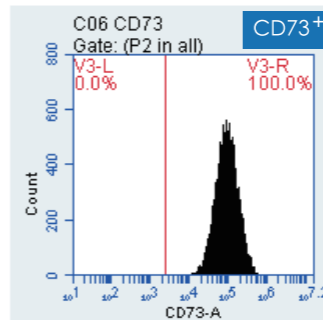
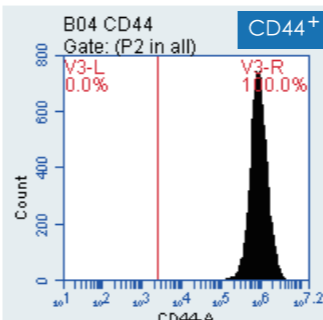
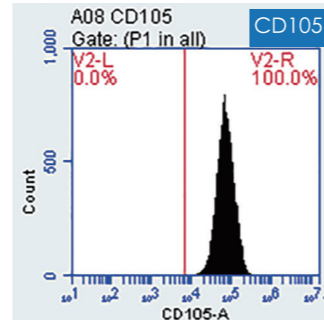
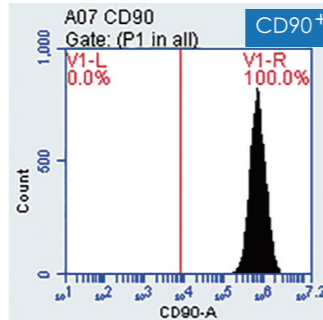
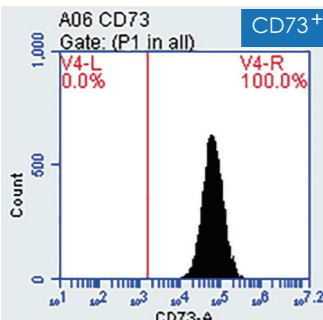
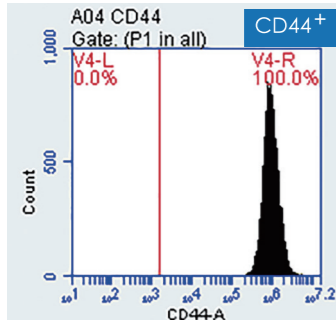
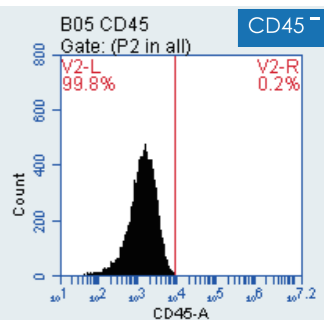
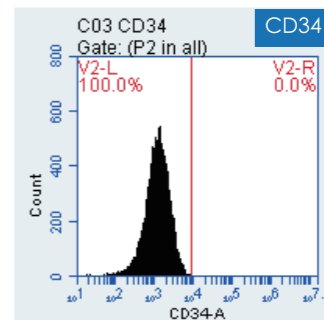
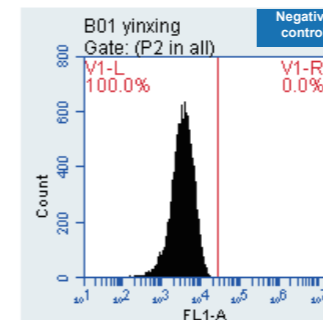
### P10 Phenotyping



### P8 Phenotyping



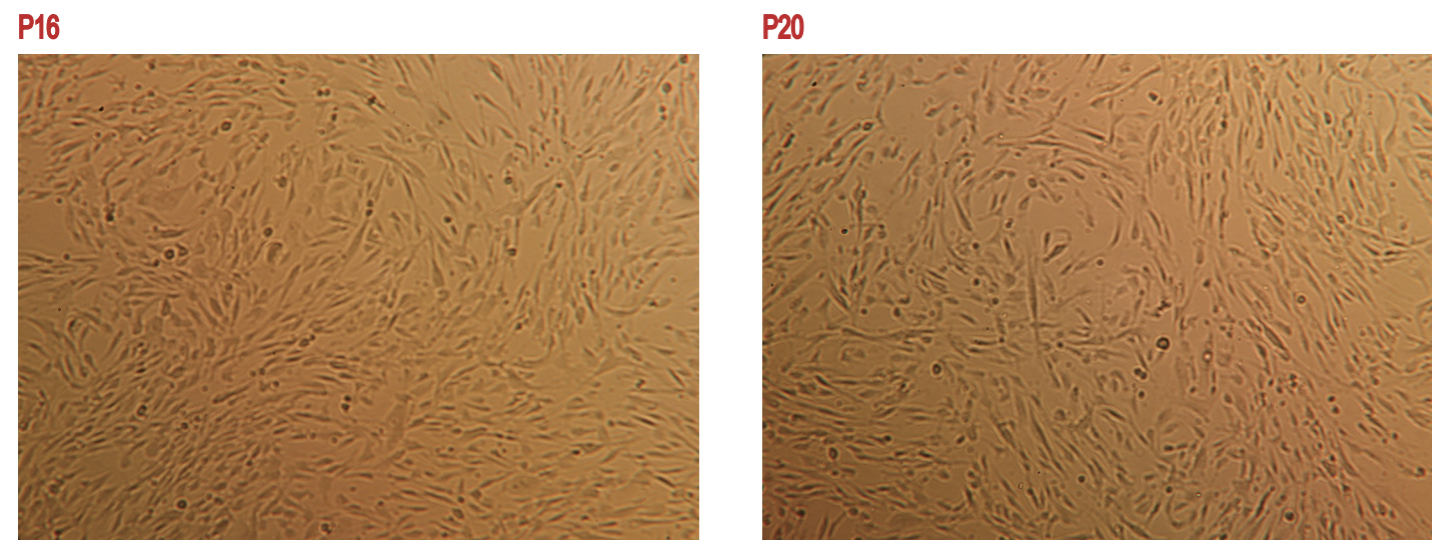
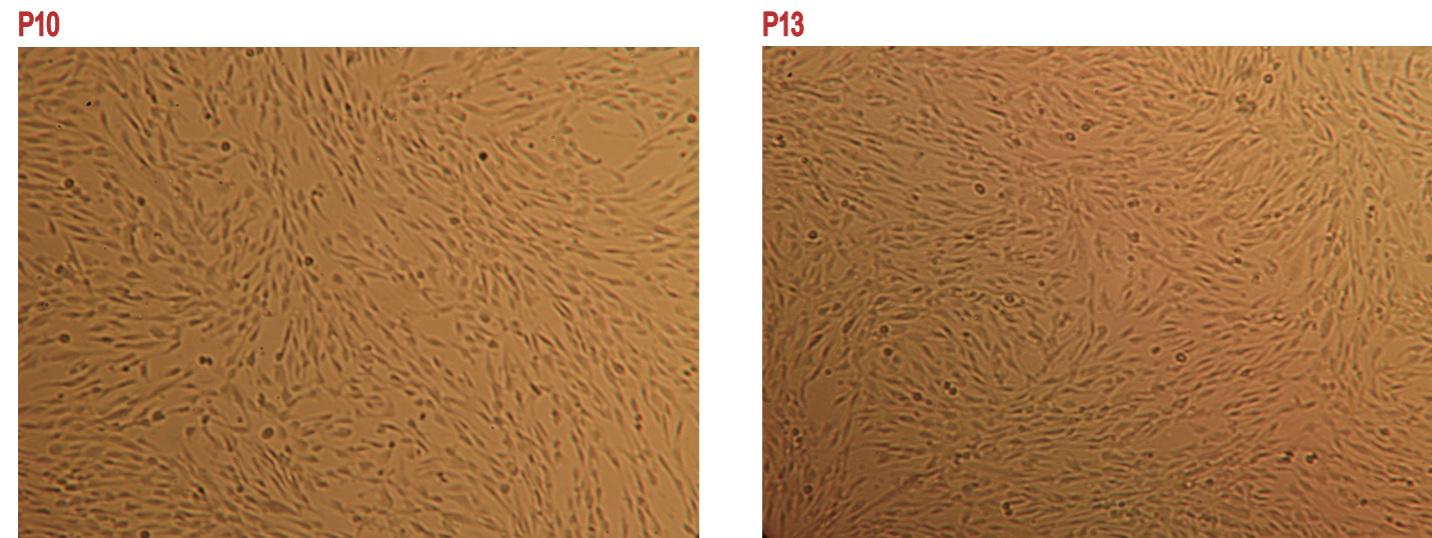
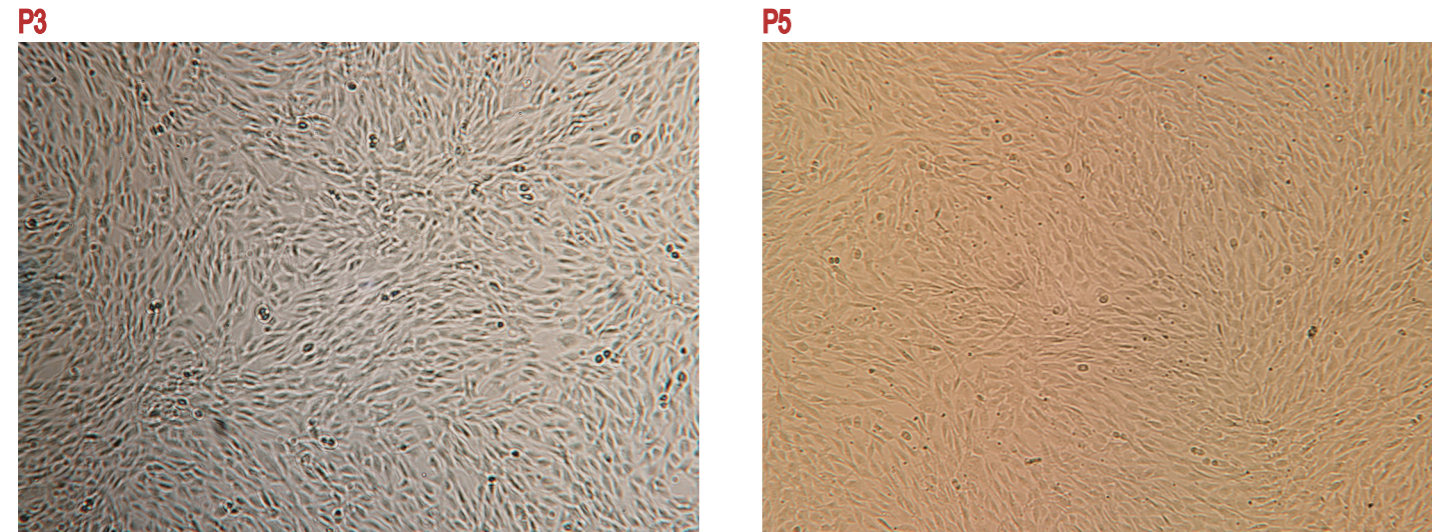
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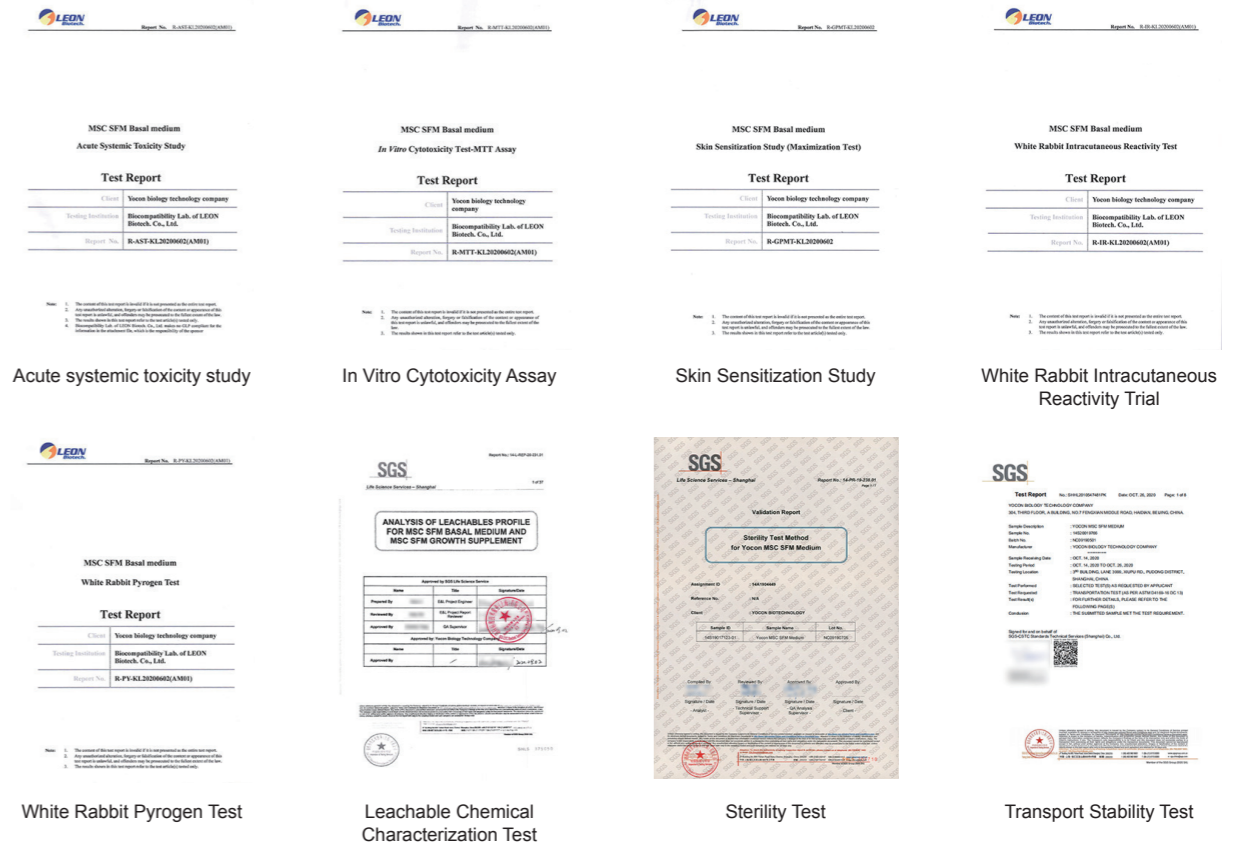
## ADSCs recovery

### Recovery of cryopreserved primary ADSCs

The primary ADSCs were cryopreserved using the Yocon Biology serum free cell cryopreservation media, recovered in ADSC serum free media for 72 hours, and then serially passaged.



## Biocompatibility and Toxicity Studies



## Hardware Conditions

Yocon Biology has the first fully automatic liquid culture medium production line in China, including 6 major subsystems such as pure water system, distilled water system, cooling water system, online steam sterilization system, liquid dispensing system, and filling system. Yocon Biology is the Class II in vitro diagnostic reagent. manufacturer, and meets the GMP production requirements.



The first fully automatic liquid culture medium filling line in China



Distilled water system to ensure endotoxin below 0.015 EU/ml



Fully automatic liquid dispensing system with the batch output of 1000 L



CIP&SIP, to ensure the sterility of the whole manufacturing process