

MSC Serum Free Media (Passage of Umbilical Cord-Cryopreserved Cells and High-Passage Cells)

Nomenclature	Specification	Cat No.	Brief description of use	Expiry date
MSC Serum Free Basal Medium	500 mL/vial	NC0103	5 mL NC0105.S is added to 500 mL NC0103 for subculturing of umbilical cord-derived cryopreserved cells and high-passage cells.	2- 8°C, 12 months
MSC Serum Free Medium Supplement 2 (Passage of Umbilical Cord-Cryopreserved Cells and High-Passage Cells)	5 mL/vial	NC0105.S		-20°C, 12 months

Stem Cell Digestion Products

Nomenclature	Specification	Cat No.	Brief description of use	Expiry date
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 Mild Digestive Enzyme	100 mL/vial	NC1004.2	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



MSC Serum Free Media

(Passage of Umbilical Cord-Cryopreserved Cells and High-Passage Cells)

US FDA Class II Medical Device Registration No. 510(K): K190983

NMPA Pharmaceutical Excipients Registration No.: F20190000508



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

MSC passaging

Passaging

The primary cells isolated from the umbilical cord or the constructed seed bank cells (cultured with NC0103+NC0103.S)

Serial Passage Data

are subcultured and can be stably passaged to 20 generations.

Total harvested P3 cells 6480×10^7 .

Total harvested P10 cells 58000×10^{13} .

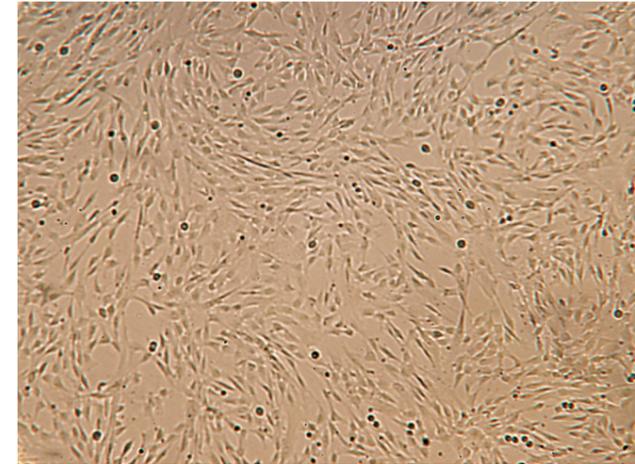
Total harvested P20 cells 423959×10^{20} .



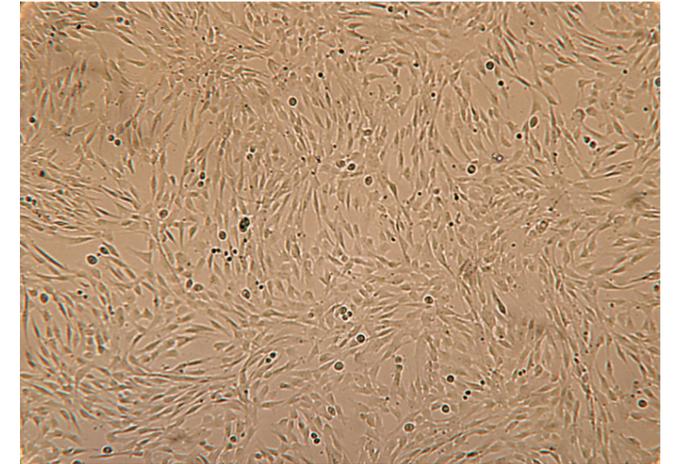
Passage	Seeding density (pcs/cm ²)	Time	Confluence	Total harvested cells (pcs)/150 plates	Amplification factor	Total harvested cells (pcs)	Total amplification factor
Primary		12-14 days		3.00E06		2.4E+07	-
P1	8000	72h	80% ~ 90%	1.85E07	15.45	37 E+07	15
P2				1.58E07	13.13	486 E+07	203
P3				1.60E07	13.31	6480 E+07	2700
P4				1.38E07	11.48	74392 E+07	3.10E4
P5				1.27E07	10.56	785576 E+07	3.27E5
P6	10000			1.62E07	11.57	9089117 E+07	3.79E6
P7				1.24E07	8.84	80347790 E+07	3.35E7
P8				1.53E07	10.91	876594392 E+07	3.65E8
P9				1.15E07	7.68	6732244929 E+07	2.81E9
P10				1.29E07	8.62	58031951290 E+07	2.42E10
P11				1.28E07	8.56	496753503043 E+07	2.07E11
P12				1.05E07	7.03	3492177126395 E+07	1.46E12
P13				1.30E07	10.82	37785356507598 E+07	1.57E13
P14				8.50E06	7.08	267520324073795 E+07	1.11E14
P15				6.52E06	5.43	1452635359720710 E+07	6.05E14
P16				6.74E06	5.62	8163810721630380 E+07	3.40E15
P17				6.18E06	5.15	42043625216396500 E+07	1.75E16
P18				6.50E06	5.42	227876448672869000 E+07	9.49E16
P19				5.47E06	4.56	1039116605948280000 E+07	4.32E17
P20				4.90E06	4.08	4239595752268990000 E+07	1.77E18

Cell morphology

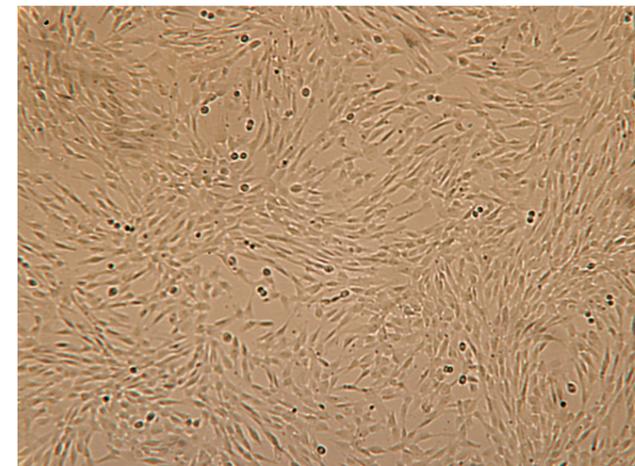
P1



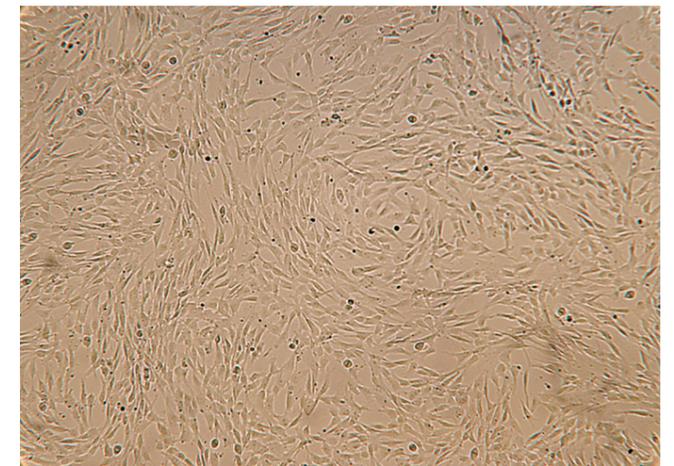
P2



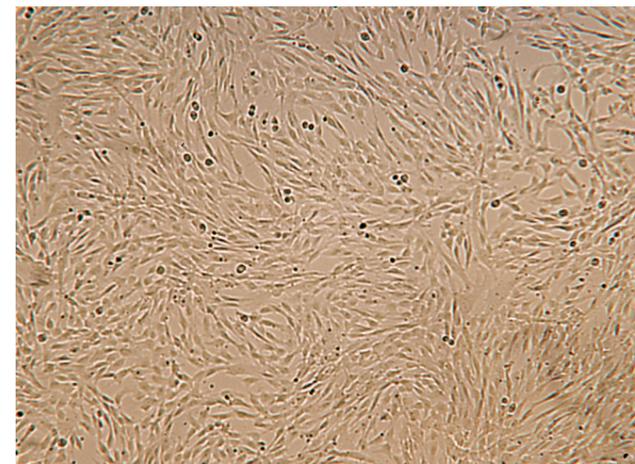
P3



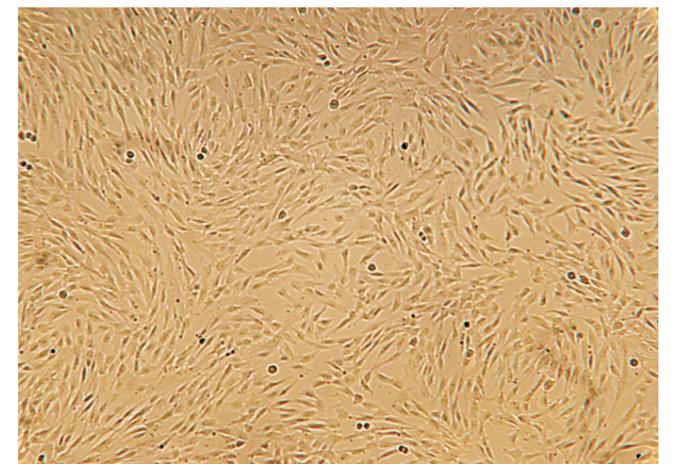
P4



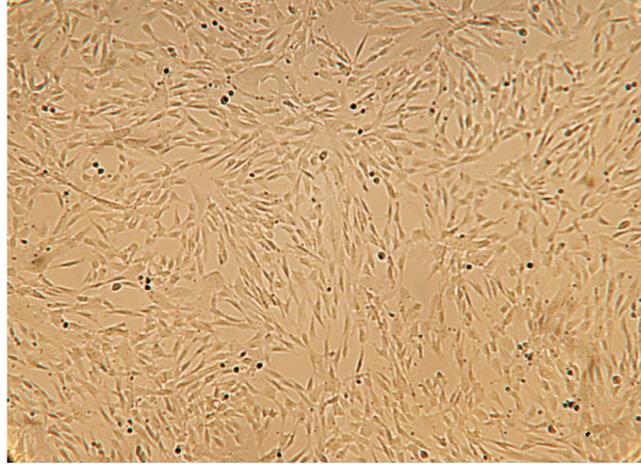
P5



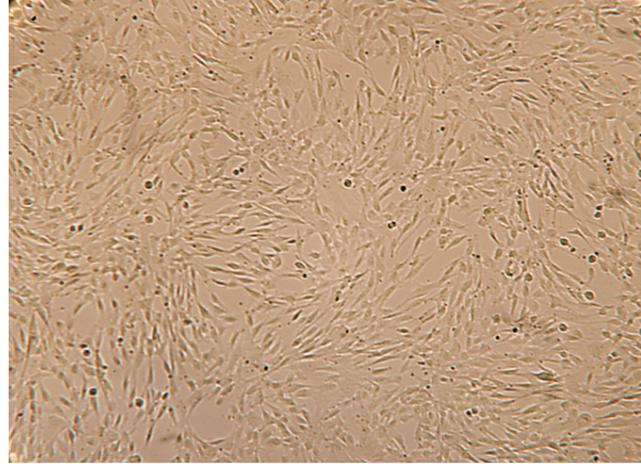
P6



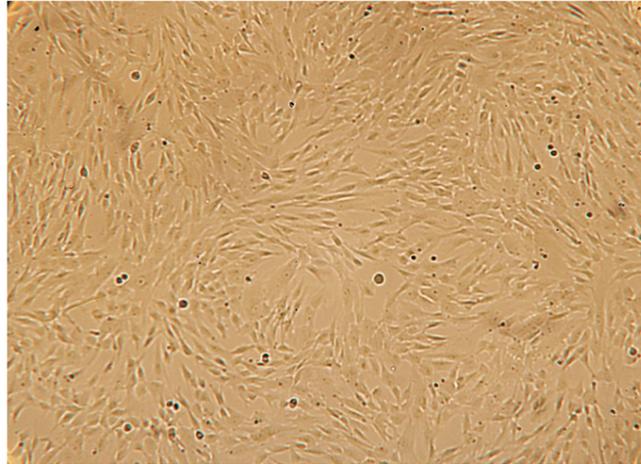
P8



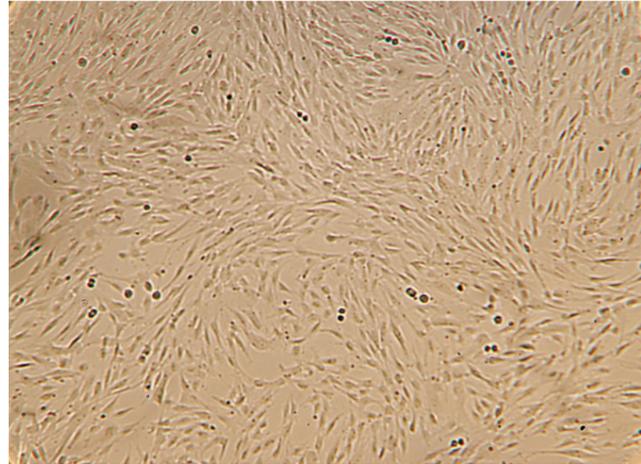
P10



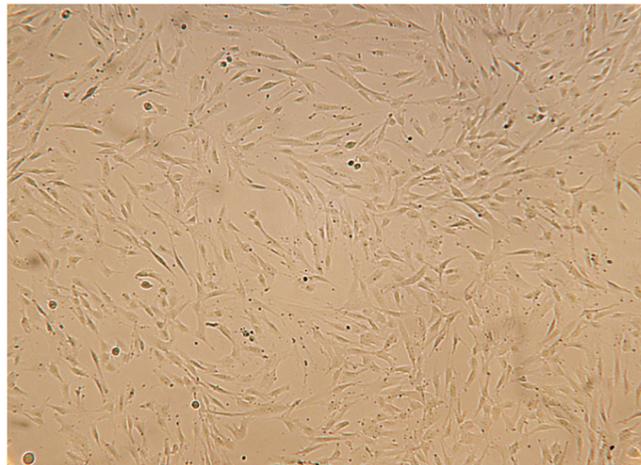
P13



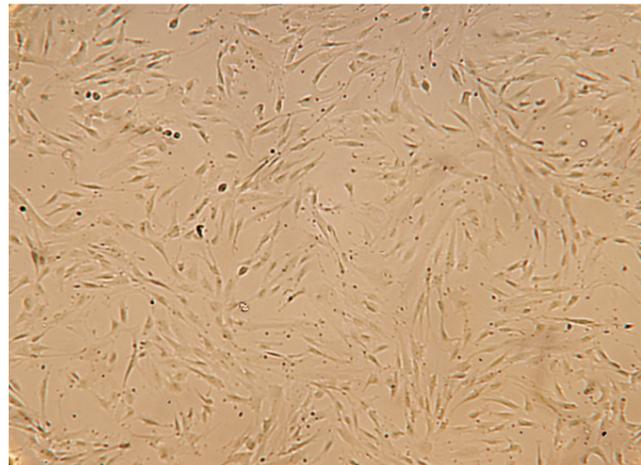
P15



P18

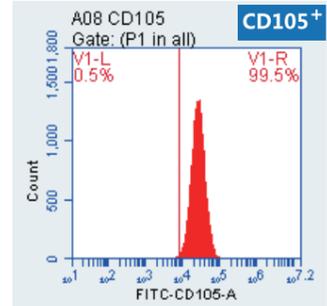
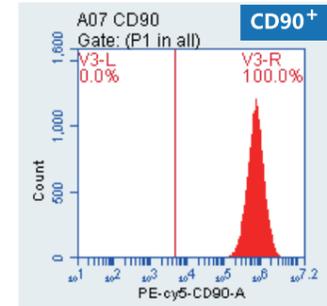
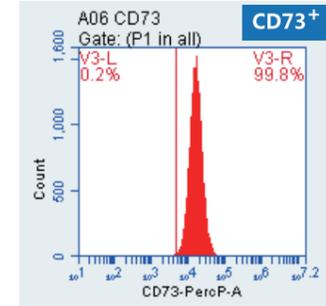
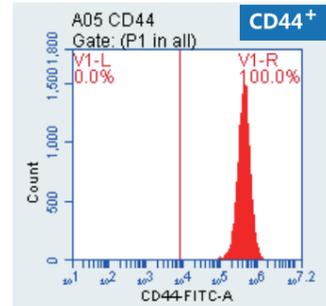
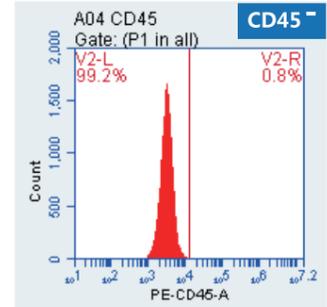
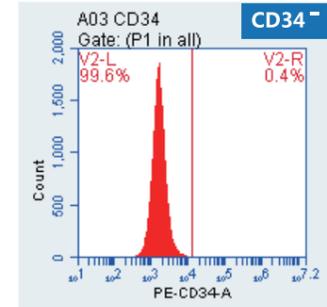
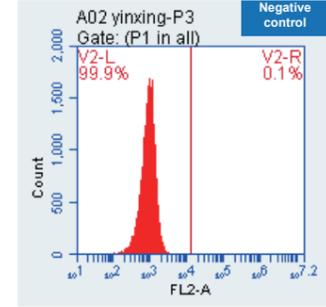


P20

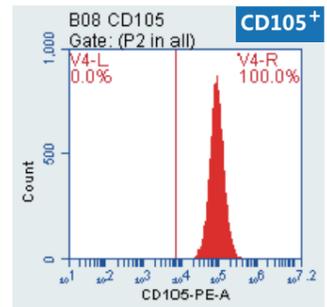
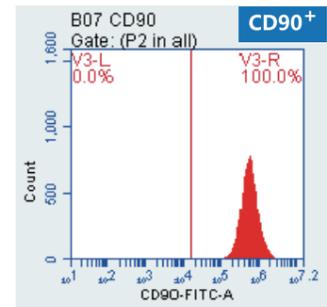
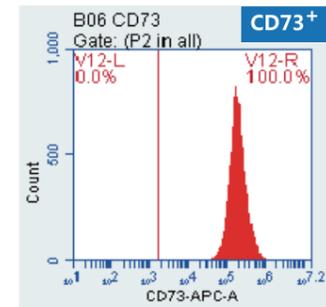
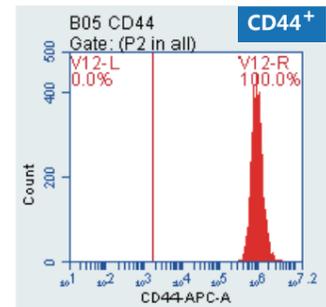
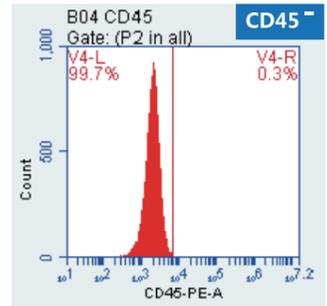
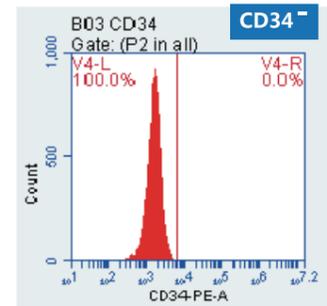
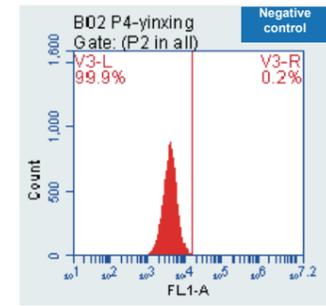


Immunophenotyping

P3 Phenotyping

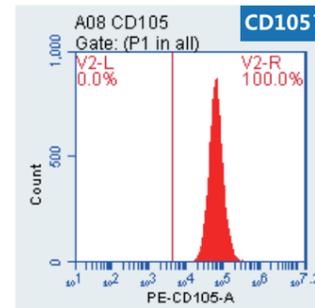
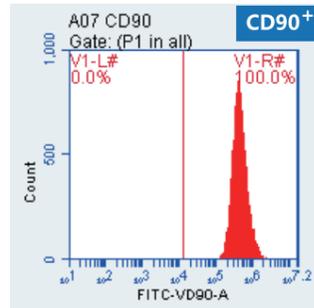
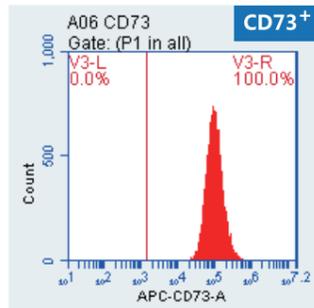
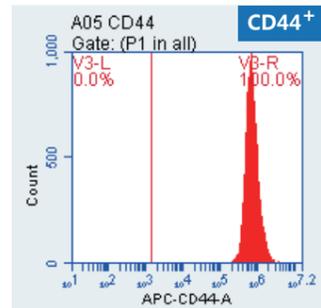
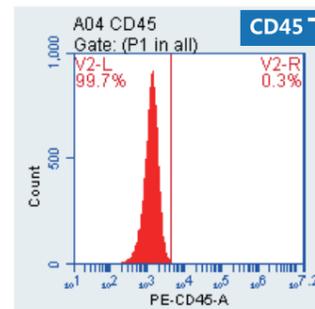
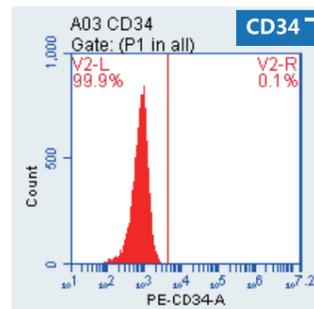
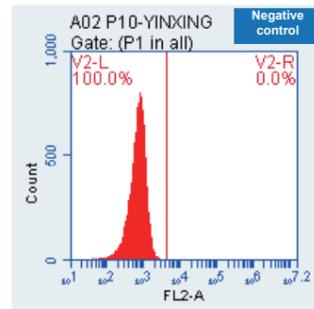


P4 Phenotyping

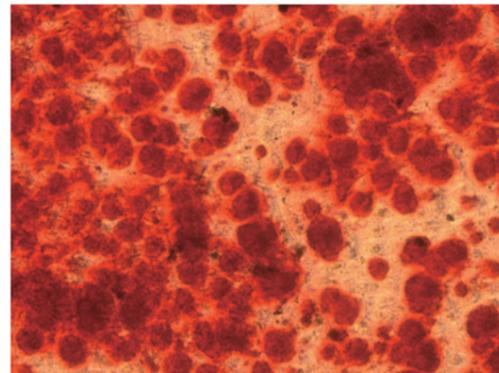


Biocompatibility and Toxicity Studies

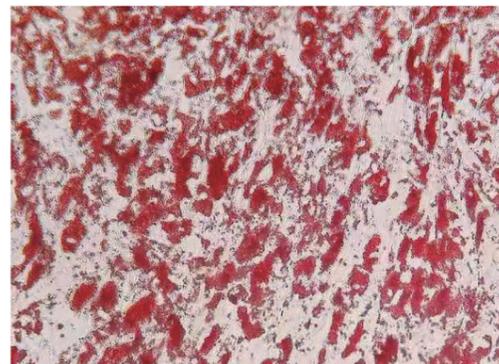
P4 Phenotyping



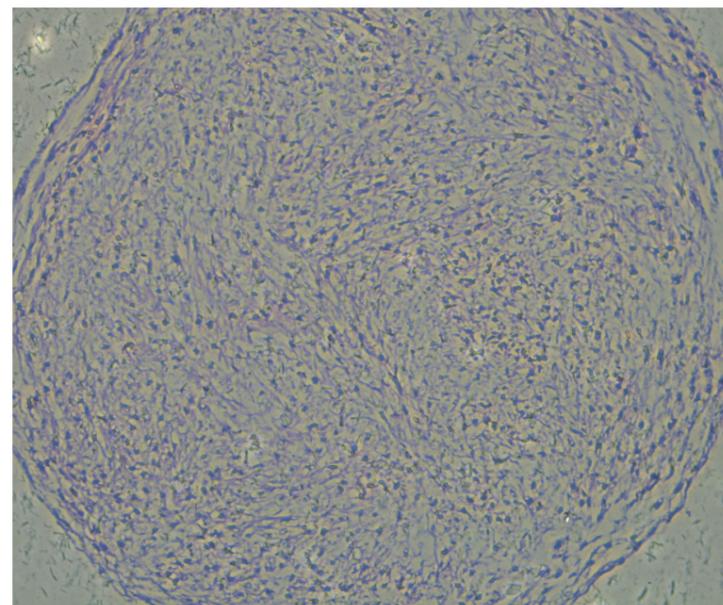
Induced differentiation



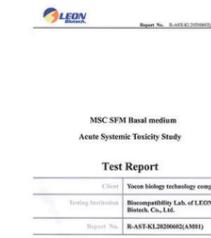
Result of induced osteogenic differentiation



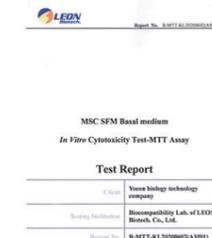
Result of induced adipogenic differentiation



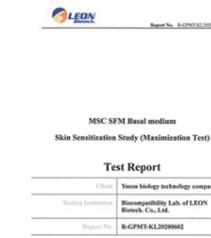
Result of induced chondrogenic differentiation



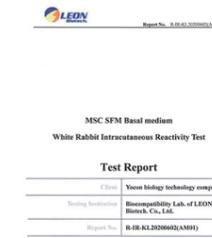
Acute systemic toxicity study



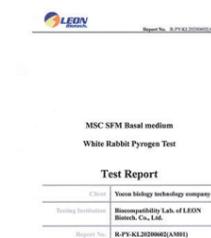
In Vitro Cytotoxicity Assay



Skin Sensitization Study



White Rabbit Intracutaneous Reactivity Trial



White Rabbit Pyrogen Test



Leachable Chemical Characterization Test



Sterility Test



Transport Stability Test

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