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Serum Free Medium

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Medium

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Cell Culture

TransStem[®] Chemically Defined Xeno-free Human Pluripotent Stem Cell Medium

TransStem[®] Serum-Free, Xeno-Free Human Mesenchymal Stromal Cell Medium

TransSup[™] CDM-XF Supplement

03

Cell Differentiation

TransDiffer[®] Human Neural Stem Cell Differentiation Kit

TransDiffer[®] Human Definitive Endoderm Cell Differentiation Kit

TransDiffer[®] Human Mesenchymal Stromal Cell Chondrogenic Differentiation Medium

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Cell Identification and Preservation

TransDetect[®] Alkaline Phosphatase Live Detection Kit

TransDetect[®] Oil Red O Staining Kit

TransDetect[®] Alizarin Red S Staining Kit (1%, pH4.2)

TransDetect[®] Alcian Blue Staining Solution (pH2.5)

TransStem[®] Chemically Defined Xeno-free Cell Cryopreservation Medium

TransStem[®] Chemically Defined Xeno-free Cell Cryopreservation Medium III—DMSO Free, Protein Free

09

Small Molecule Compounds

TransSmall[®] Y-27632 (Dihydrochloride)

TransSmall[®] SB431542

TransSmall[®] CHIR99021

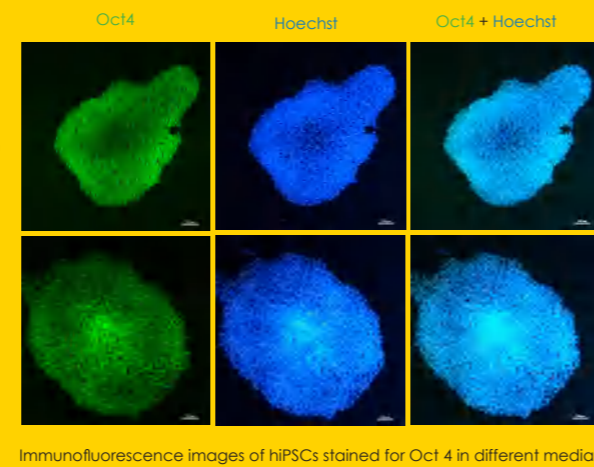
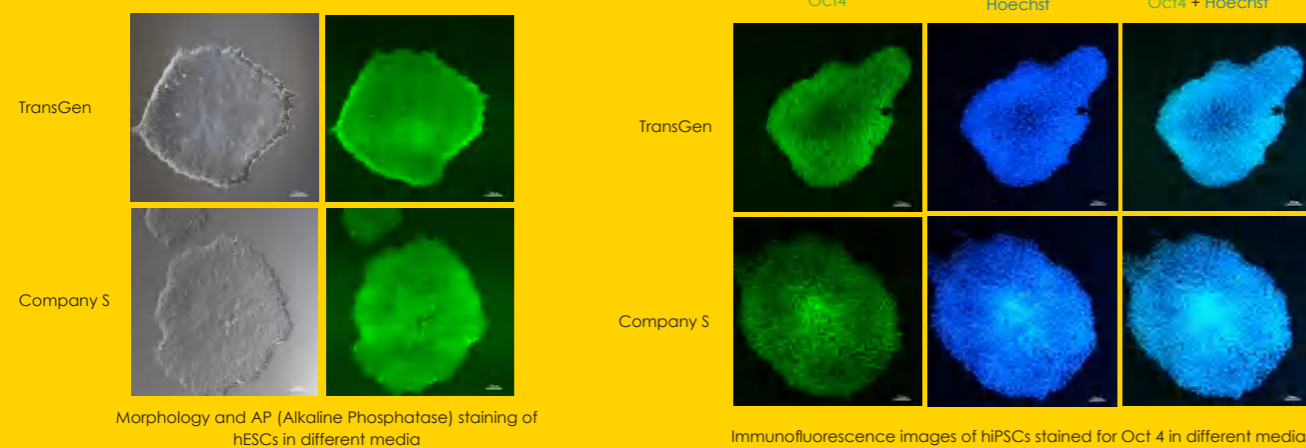
A

Cell Culture

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TransStem[®] Chemically Defined Xeno-free Human Pluripotent Stem Cell Medium (MP101)

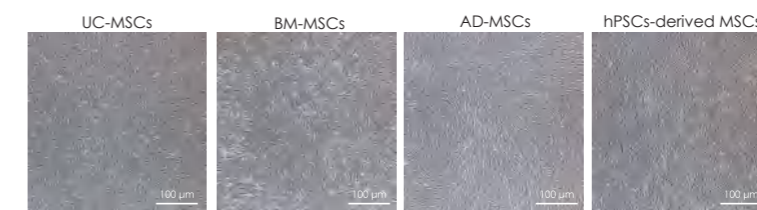
- A complete, chemically defined, and xeno-free growth medium for human pluripotent stem cells (hPSCs) under feeder-free conditions
- Albumin-free and not affected by quality differences between albumin batches
- Stable support for the rapid proliferation and pluripotency maintenance of human pluripotent stem cells in a long term



TransStem[®] Serum-Free, Xeno-Free Human Mesenchymal Stromal Cell Medium (MM101)

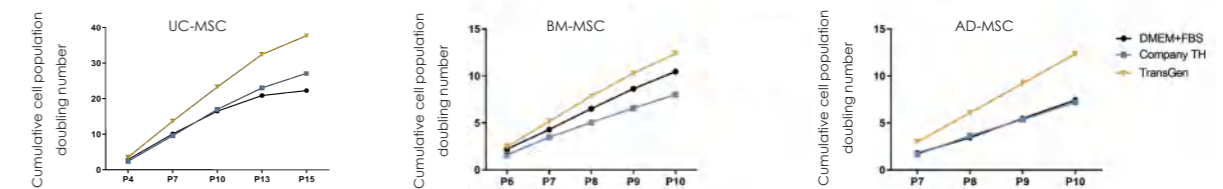
02

- Serum-free, xeno-free
- Suitable for primary isolation, culture, passage and expansion culture of mesenchymal stem cells from various sources such as umbilical cord, bone marrow, and adipose, as well as the passage expansion culture of human pluripotent stem cell-derived mesenchymal stem cells.
- Good stability, enabling stable passages of UC-MSCs up to 15 generations.
- High capabilities to differentiate into osteogenic, cartilage, and adipocyte lineages and enhanced immunomodulatory ability
- The production of core raw materials complies with cGMP standards and has been registered with FDA DMF II.
- It has applied for a national invention patent (patent number: 202010182051.6).

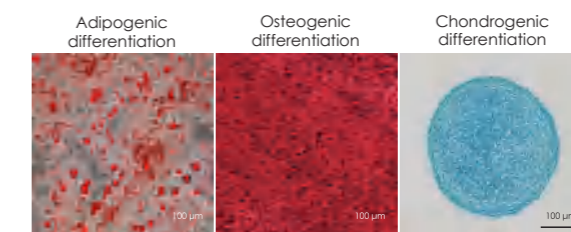


Cell morphology of hMSCs from different sources cultured in TransStem[®] Serum-Free, Xeno-Free Human Mesenchymal Stromal Cell Medium

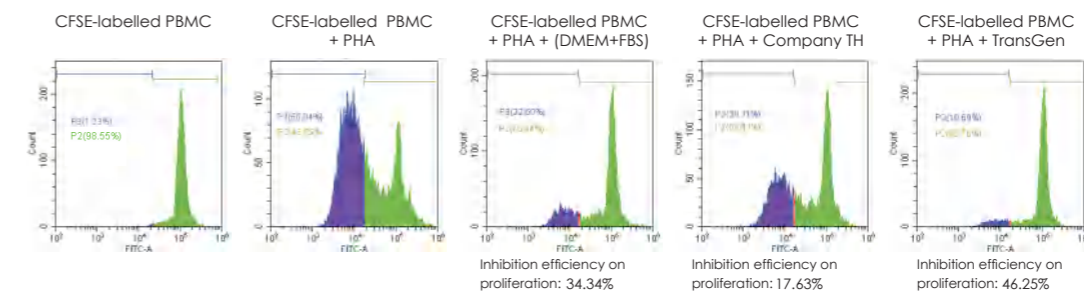
UC-MSCs: Umbilical cord mesenchymal stem cells
BM-MSCs: Bone marrow mesenchymal stem cells
AD-MSCs: Adipose-derived mesenchymal stem cells
hPSCs-derived MSCs: Human pluripotent stem cell-derived mesenchymal stem cells



Cell number figure of hMSCs from different sources over several passages cultured in media of Company TH, TransGen, and serum-containing medium, respectively



Oil red O staining Alizarin red staining Alician blue staining
 UC-MSCs cultured in TransStem[®] Serum-Free, Xeno-Free Human Mesenchymal Stromal Cell Medium are induced to differentiate into adipocytes, osteoblasts and chondrocytes.

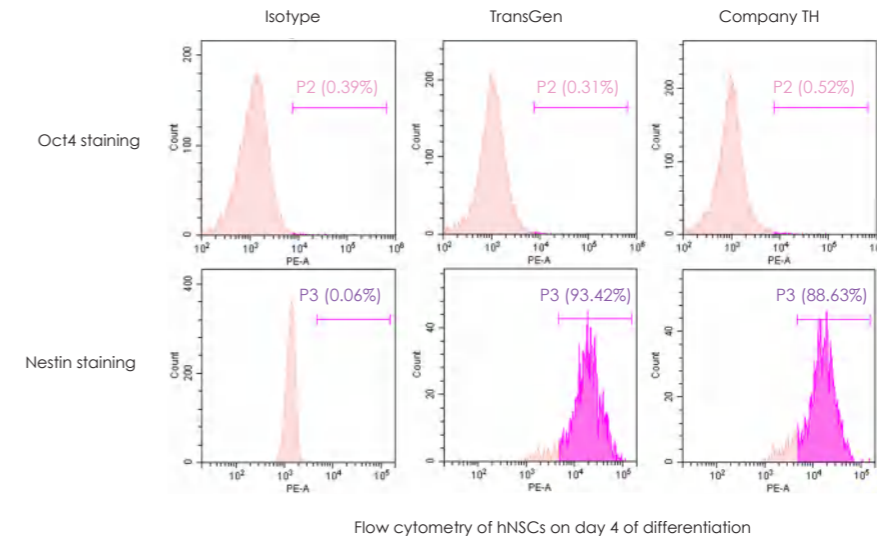
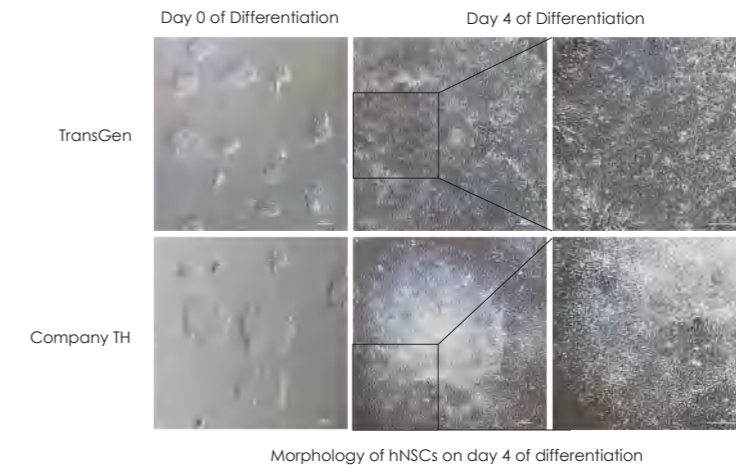
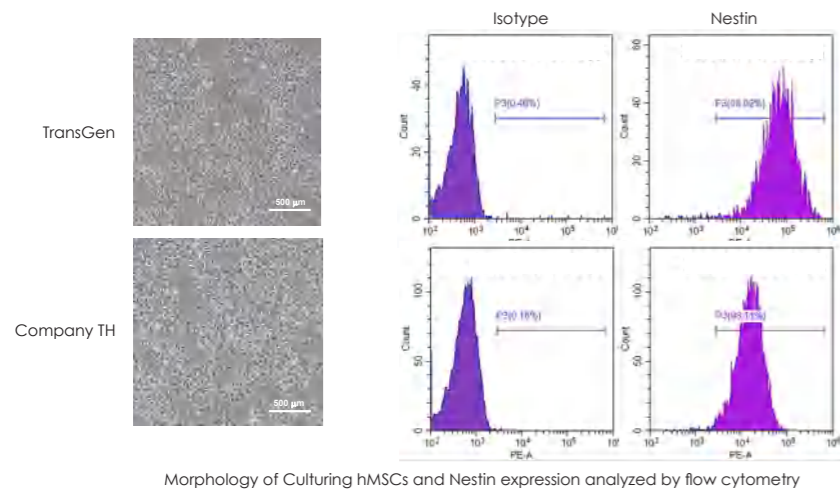


Under PHA (phytohemagglutinin) stimulation, UC-MSCs inhibition efficiency cultured in different media on PBMC (peripheral blood mononuclear cells) proliferation (P2 represents the proportion of non-proliferating cells, P3 represents the proportion of proliferating cells)

TransSup[®] CDM-XF Supplement (MN201)

03

- This product is suitable for the differentiation of human pluripotent stem cells into neural lineage cells cultured in E8 Medium and TransStem[®] Chemically Defined Xeno-free Human Pluripotent Stem Cell Medium (Cat. No. MP101).
- It can be used for the culture of human neural lineage cells.
- It has been applied for a national invention patent (patent number: 201711065836.X)



B

Cell Differentiation

TransDiffer[®] Human Neural Stem Cell Differentiation Kit (MN301)

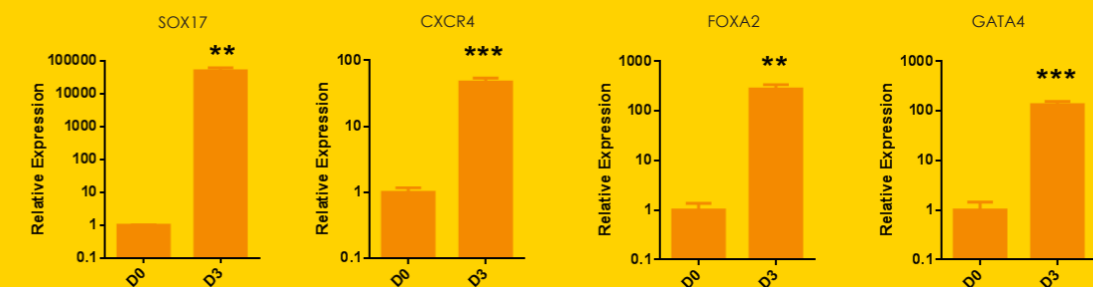
- Chemically defined, Xeno-free, albumin-free, not affected by the quality differences between albumin batches
- Generation of neural stem cells in 4 days with over 90% efficiency

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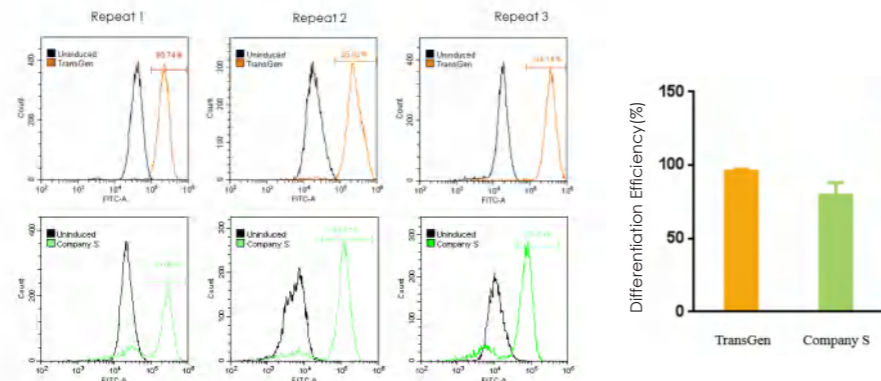
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TransDiffer[®] Human Definitive Endoderm Cell Differentiation Kit (MN701)

- Chemically defined, Xeno-free, albumin-free, batch-to-batch stability, and safe application
- High-purity definitive endoderm cells can be generated in 3 days, with >90% differentiation efficiency.



The expression profile of endoderm marker genes on day 0 and day 3 of differentiation. Data were presented as mean ± SEM, n=3, **p < 0.01, ***p < 0.001.

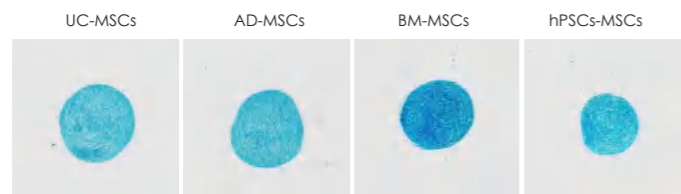


SOX17 expression analyzed by flow cytometry using different definitive endoderm cell differentiation kits indicating differentiation result.
 (The SOX17+ ratio of TransGen is 94.97±0.80%, n=3; The SOX17+ ratio of Company S is 76.45±6.01%, n=3)

03

TransDiffer[®] Human Mesenchymal Stromal Cell Chondrogenic Differentiation Medium (MM401)

- Serum-free medium
- Versatile application: Suitable for chondrogenic differentiation of human mesenchymal stem cells from various sources such as umbilical cord, bone marrow, and adipose.
- Stable differentiation: High differentiation efficiency and short cycle.
- High stability: The prepared complete medium maintains a good induction effect after being placed.
- It is suitable for the identification of chondrogenic differentiation ability of MSCs cultured in different grades of media.
- Simple operation: It can be finished at centrifuge tube, no low-adherence culture plate is required, and the medium is changed every 2-3 days.



Chondrogenic differentiation of hMSCs from different sources

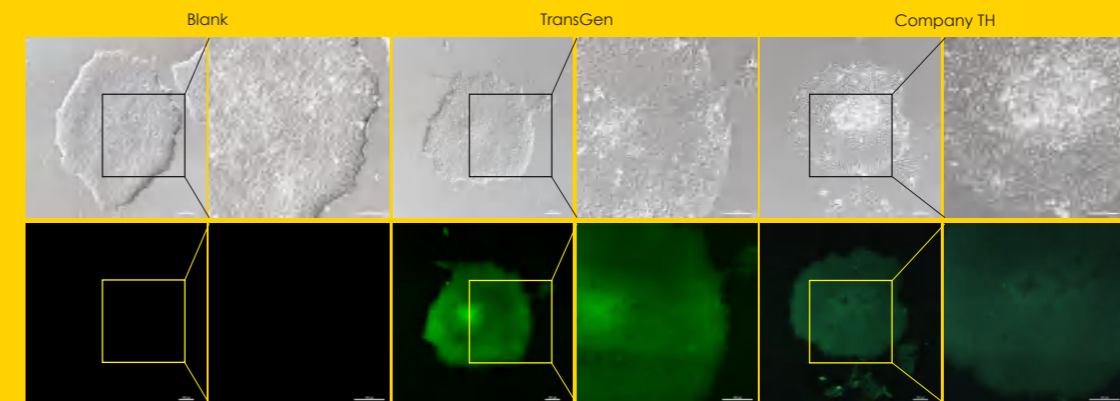
C

Cell Identification and Preservation

TransDetect[®] Alkaline Phosphatase Live Detection Kit (MA101)

- Alkaline phosphatase (AP) is a marker of pluripotent stem cells in which its expression is elevated. During somatic cell reprogramming, activation of alkaline phosphatase is necessary for successful reprogramming.
- Live cell staining, non-toxic to cells, no impact on physiological function of cells.
- High sensitivity, easy operation and time-saving

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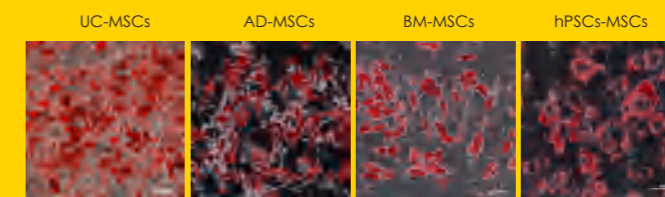


AP staining of hESCs with different kits

TransDetect[®] Oil Red O Staining Kit (MM202)

- The product components include fixative and staining solution, no need to prepare the fixative solution.
- Fast staining, with fixation for 30 min, staining for 30 min, and 1 h to complete the experiment
- Smaller lipid droplets can be stained.

02

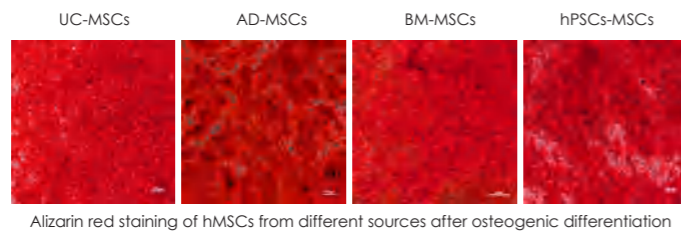


Oil red O staining of hMSCs from different sources after adipogenic differentiation

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TransDetect[®] Alizarin Red S Staining Kit (1%, pH4.2) (MM302)

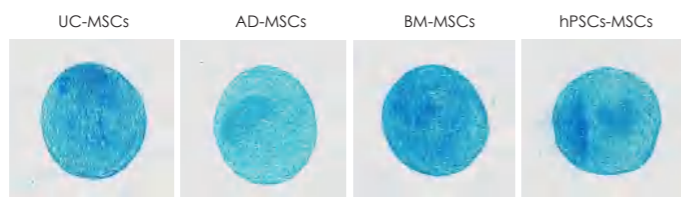
- Product components include fixative and staining solution, no need to prepare fixative solution.
- Fast staining which can be completed in only 5-10 min
- Good staining with clear coloring



Alizarin red staining of hMSCs from different sources after osteogenic differentiation

TransDetect[®] Alcian Blue Staining Solution (pH2.5) (MM402)

- Fast staining, can be completed in only 5 minutes
- Good staining effect with clear coloring.
- The staining is stable, and the stained sections can be stored for a long time.



Alcian blue staining of hMSCs from different sources after chondrogenic differentiation

04

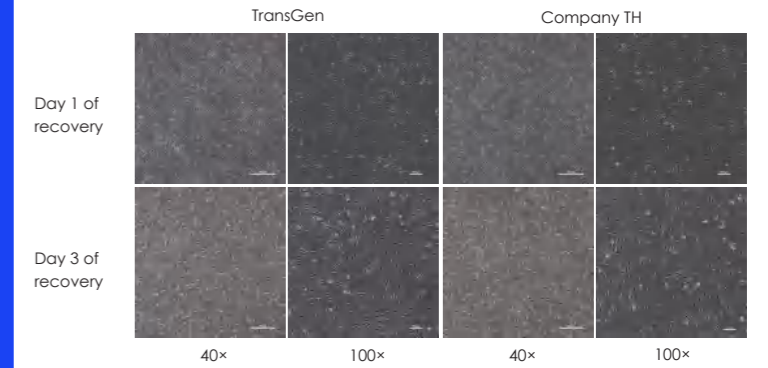
TransStem[®] 05 Chemically Defined Xeno-free Cell Cryopreservation Medium (MC101)

- Chemically defined, Xeno-free, albumin-free
- Not affected by batch-to-batch quality differences in serum albumin
- Intended for freezing and storing a variety of cell types, including human pluripotent stem cells, neural stem cells, mesenchymal stem cells, epithelial cells, fibroblasts and other different types of cells
- High cell viability and efficient recovery

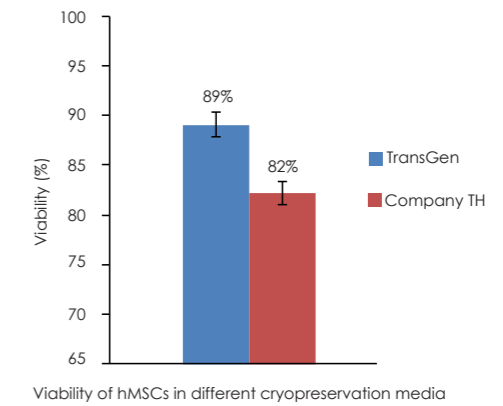
TransStem[®] 06 Chemically Defined Xeno-free Cell Cryopreservation Medium III-DMSO Free, Protein Free (MC131)

- Xeno-free, chemically defined, and good batch-to-batch stability
- No dimethyl sulfoxide (DMSO), minimizing cytotoxicity.
- All of the components are "pharmaceutical" grade, after completing toxicity experiments, and can be used for cell pharmaceutical excipients
- No protein components, especially suitable for protein-expressing cells
- No need for programmed cooling, direct -80 °C cryopreservation. For long-term storage,
- transfer to liquid nitrogen after freezing overnight at -80°C.
- Suitable for most cells, including DMSO-sensitive cells and protein expressing cells. The recovery viability rate can reach more than 90%.

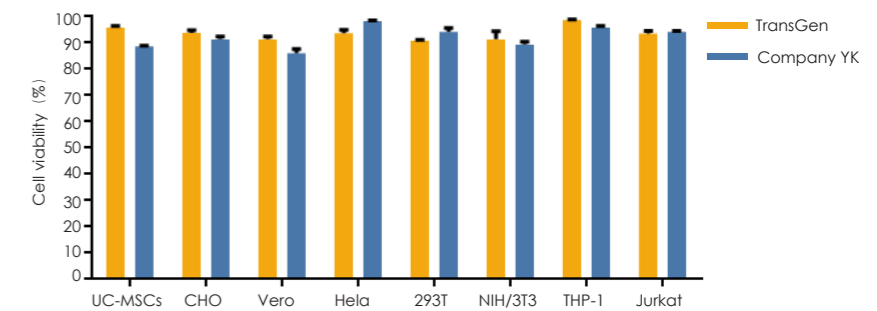
High Viability



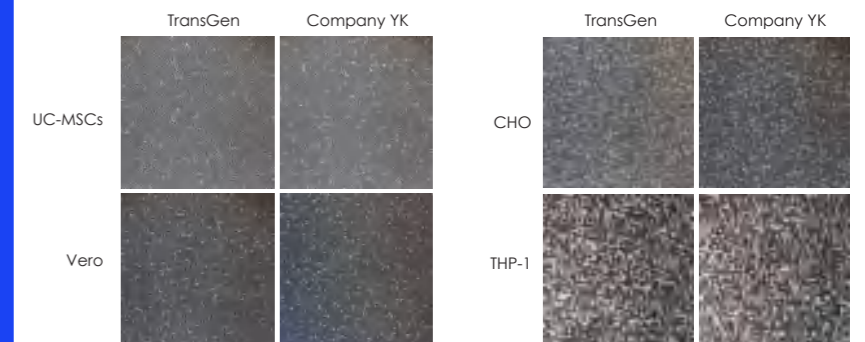
Cell morphology after recovery of hMSCs cryopreserved in different cryopreservation media



High Viability



Comparison of viability after recovery of various cells using DMSO-free, protein-free cryopreservation media from TransGen and Company YK at -80°C for 1 month



Comparison of cell adhesion after 24-hour recovery of various cells using DMSO-free, protein-free cryopreservation media from TransGen and Company YK at -80°C for 1 month

High Safety

TransGen cryopreservation medium has no acute systemic toxicity in mice

Group Name	No.	Dosage(μL)	Body Weight(g)				Normal Saline		TransGen		
			0 h	24 h	48 h	72 h	Normal	Abnormal	Normal	Abnormal	
Normal saline	1-1	308	30.8	30.4	30.8	30.6	Appearance	6	0	6	0
	1-2	311	31.1	29.2	30.5	32					
	1-3	323	32.3	33.1	33.6	34.3					
	1-4	352	35.2	32.7	34.6	37.8					
	1-5	342	34.2	35.2	35.5	36.9					
	1-6	405	40.5	41.6	41	41.5					
TransGen	2-1	321	32.1	32.8	32.6	33.2	Breathing	6	0	6	0
	2-2	331	33.1	32.8	33.4	35.2					
	2-3	310	31	32.2	33.2	32.3					
	2-4	403	40.3	38.8	40.1	42.6					
	2-5	405	40.5	41.5	40.5	40.9					
	2-6	370	37	36.5	38	41.2					
						Behavior	6	0	6	0	
						Diet	6	0	6	0	
						Secretion	6	0	6	0	
						Excretion	6	0	6	0	

Mice dose and body weight data

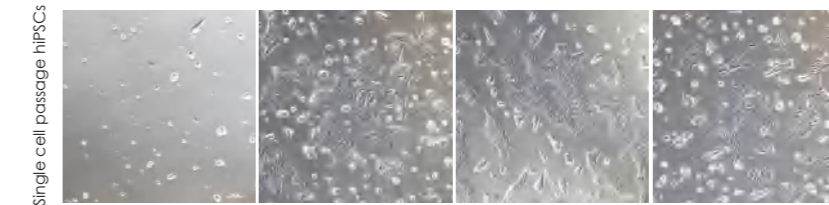
Clinical observations in mice

Comparison with Traditional Cryopreservation Medium

	Traditional Cryopreservation Medium (90% medium+ 10% DMSO)	TransGen
Serum	Yes	No
DMSO	Yes	No
Protein	Yes	No
Chemically defined	No	Yes
Programmed cooling	Required	Not required
Lot Variation	Large	Very small
Safety	Have risks of contamination by animal-derived viruses, molds and mycoplasma	No risk of external contamination
Applying for pharmaceutical excipients	Extremely difficult	Relatively easy
Can it be used for clinical use?	No, it contains animal serum	Yes, all of the components are "pharmaceutical" grade.



Cell morphology of hESCs on the first day after cryopreservation and recovery with adding different sources of Y-27632 (10 μM) to TransStem® hPSC medium (MP101)

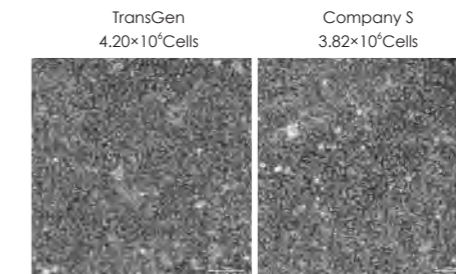


Cell morphology of hiPSCs on the first day after single-cell passage with adding different sources of Y-27632 (10 μM) to TransStem® hPSC medium (MP101)

TransSmall® SB431542 (MS201)

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- A potent and selective inhibitor of the TGF-β signaling
- Promote differentiation and reprogramming of hPSCs

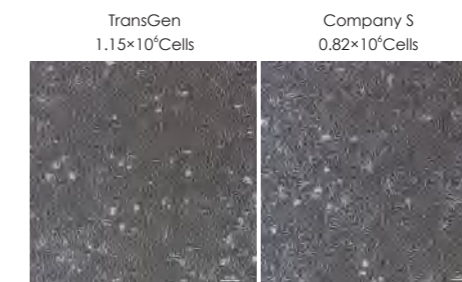


Cell morphology and cell count after 4 days of hPSCs differentiation into neural stem cells induced by SB431542 from different sources (Initiated differentiation at the seeding density of 1.0×10^5 hPSCs)

TransSmall® CHIR99021 (MS301)

03

- A potent and selective inhibitor of GSK3 (GSK3: a key inhibitor of WNT signaling pathway)
- Promote self-renewal, differentiation and reprogramming of hPSCs



Morphology and cell count after 3 days of hPSC differentiation into definitive endoderm cells induced by CHIR99021 from different sources (Initiated differentiation at the seeding density of 2.0×10^5 hPSC cells)

D Small Molecule Compounds

TransSmall® Y-27632 (Dihydrochloride) (MS101)

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- A potent and selective Rho-associated, coiled-coil containing protein kinase (ROCK) inhibitor
- Used for maintenance, reprogramming and differentiation of stem cells: Promote hPSCs survival in a single cell state

Product Name	Cat. No.	Specifications
TransStem® Chemically Defined Xeno-free Human Pluripotent Stem Cell Medium	MP101-01	500 ml
TransStem® Serum-Free, Xeno-Free Human Mesenchymal Stromal Cell Medium	MM101-01	500 ml
TransSup™ CDM-XF Supplement	MN201-01	10×1 ml
TransDiffer® Human Neural Stem Cells Differentiation Kit	MN301-01	100 ml
TransDiffer® Human Definitive Endoderm Cells Differentiation Kit	MN701-01	1 kit
TransDiffer® Human Mesenchymal Stromal Cell Adipogenic Differentiation Medium	MM201-01	200 ml
TransDiffer® Human Mesenchymal Stromal Cell Osteogenic Differentiation Medium	MM301-01	200 ml
TransDiffer® Human Mesenchymal Stromal Cell Chondrogenic Differentiation Medium	MM401-01	100 ml
TransDetect® Alkaline Phosphatase Live Detection Kit	MA101-01	25 µl
	MA101-02	50 µl
TransDetect® Oil Red O Staining Kit	MM202-01	40 ml
	MM202-02	100 ml
TransDetect® A lizarin Red S Staining Kit (1%, pH4.2)	MM302-01	100 ml
TransDetect® A lican Blue Staining Solution (pH2.5)	MM402-01	50 ml
TransStem® Chemically Defined Xeno-free Cell Cryopreservation Medium	MC101-01	20 ml
TTransStem® Chemically Defined Xeno-free Cell Cryopreservation Medium—DMSO Free	MC111-01	100 ml
	MC121-01	5 ml
	MC121-02	50 ml
TransStem® Chemically Defined Xeno-free Cell Cryopreservation Medium II—DMSO Free	MC121-03	100 ml
	MC131-01	5 ml
TransStem® Chemically Defined Xeno-free Cell Cryopreservation Medium III—DMSO Free,Protein Free	MC131-02I	50 m
	MC131-03	100 m
TransSmall® Y-27632 (Dihydrochloride)	MS101-01	1 mg
	MS101-02	5×1 mg
TransSmall® SB431542	MS201-01	1 mg
	MS201-02	5×1 mg
TransSmall® CHIR99021	MS301-01	1 mg
	MS301-02	5×1 mg
T-cell Serum-Free Culture Medium	-	-



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