



DASEA® Ultramedia® Pro mesenchymal stem cell serum-free medium

US FDA CDER DMF No.: 038400

US FDA CBER DMF No.: 29712

Acute Systemic Toxicity Test

● INTRODUCTION

DASEA® Ultramedia® Pro (Um Pro) is an upgraded version of mesenchymal stem cell serum-free culture medium. This serum-free, xenogeneic-free medium can be used for both primary umbilical cord cell collection and passage culture. It supports high proliferation rates, allows for continuous passage up to P15, and maintains stable cell phenotypes.

* For research use only

● PRODUCT SPECIFICATION

Model	Product Number	Description	Component Number	Package (per bottle)
Type A	RGM0051	Basal medium (no phenol red)	RGM1051	500mL
		Supplement	RGM1053	15mL
Type B	RGM0052	Basal medium (phenol red)	RGM1052	500mL
		Supplement	RGM1053	15mL

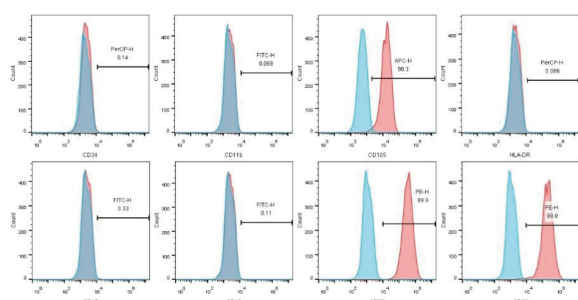
● CELLS HARVESTED BY PRIMARY/PASSAGE CULTURES

Passage	Seeding Density (UCMSCs/cm^2)	Time	Confluence	Harvested (cells) / T175	Proliferation Rate	Total Harvested (cells)	Total Proliferation Rate
Primary cultures	–	11–14 days	–	2.75E+06	–	2.20E+07	–
P1	4000–5000	72h	80% ~ 90%	1.4E+07~1.7E+07	19.5	4.3E+08	2.0E+01
P2				1.3E+07~1.6E+07	18.6	8.0E+09	3.6E+02
P3				1.1E+07~1.4E+07	15.5	1.2E+11	5.6E+03
P4				1.4E+07~1.9E+07	15.7	1.9E+12	8.8E+04
P5	1.1E+07~1.6E+07			13.1	2.5E+13	1.2E+06	
P6	5000–7000			1.0E+07~1.4E+07	11.6	3.0E+14	1.3E+07
P7				9.5E+06~1.3E+07	10.9	3.2E+15	1.5E+08
P8				8.5E+06~1.2E+07	9.7	3.1E+16	1.4E+09
P9				8.4E+06~1.2E+07	9.6	3.0E+17	1.4E+10
P10				8.2E+06~1.2E+07	9.4	2.8E+18	1.3E+11
P11	7000–10000			1.0E+07~1.5E+07	8.4	2.4E+19	1.1E+12
P12				1.0E+07~1.5E+07	8.3	2.0E+20	8.9E+12
P13				9.7E+06~1.4E+07	7.9	1.6E+21	7.1E+13
P14				8.3E+07~1.2E+07	6.8	1.1E+22	4.8E+14
P15				6.0E+06~8.6E+06	4.9	5.2E+22	2.4E+15

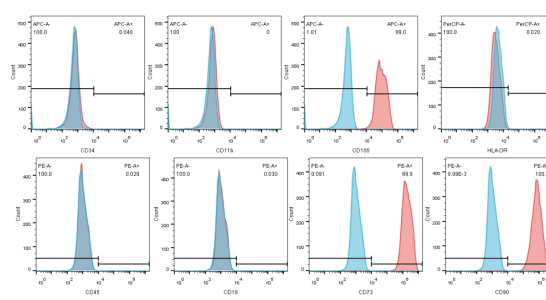
The above data are the average number of umbilical cord harvesting and multiplication times of the 6 cell lines. The proliferation rate of the actual cell line may be higher or lower than that shown of the table.

● CELL PHENOTYPE

P3



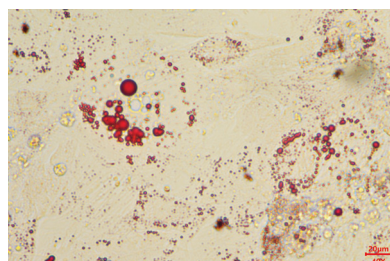
P15



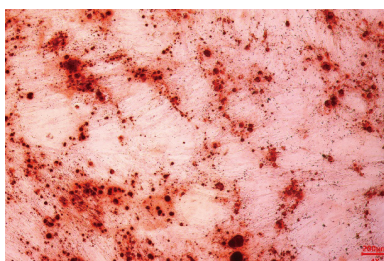
Cells were collected from umbilical cord using Um Pro and passaged up to P15. Cell phenotype change was examined by Flow Cytometry. Data shows that there is no significant change in cell phenotype between P3 and P15.

● TRILINEAGE DIFFERENTIATION

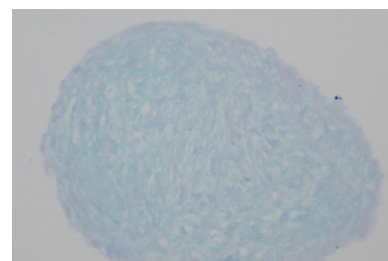
Adipogenic Differentiation



Osteogenic Differentiation



Chondrogenic Differentiation



Primary Cells were collected from umbilical cord using UM Pro. Cells were cultured up to P5 for trilineage differentiation. Data suggests that Um Pro successfully induced UCMSCs to differentiate into adipocytes, osteocytes, and chondrocytes.



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