

Characterization of hPSC

Cell Line Name	hUSiPS2			
Type of Cell Line	hiPSC			
Depositor (Institution)	Korea National Institute of Health			
Passage #	p31*			
Day of Cell Freezing	20210720*			
Analysis	Result	Passage#	Day of analysis	
Authentication (STR)	Pass	p33	20210811	
Mycoplasma test (PCR)	Pass	p33	20210804	
Microbial contamination test (Virus, Fungi, bacteria)	Pass	p29	20210826	
Cell viability	Pass (76.4±3.2%)	p32	20210726	
Attached cell number after thawing	Pass (Day4, 6.70±0.5 x10 ⁵ Cells/ml)	p33	20210730	
Karyotype (G-banding)	46,XY	p33	20210819	
CNV analysis (CMA)	Pass (arr(X,Y)x1,(1-22)x2)	p24	20210709	
Stem Cell Marker Expression				
· AP staining	Pass (Positive)	p25	20210621	
· ICC	Pass (Positive)	p25	20210625	
· qRT-PCR	Pass (Positive)	p23	20210617	
Differentiation Marker Expression				
· EB formation	Pass (EB14d)	p26	20210623	
· qRT-PCR	Pass (Positive)	p26	20210702	
· Teratoma formation	Pass (three-germ layer)	p30	20191231	
ABO genotype	OO			

** Freezing media : Stem-cellbanker(AMSBIO, Cat#I 1894)

Cell Culture Condition

- Feeder/matrix Vitronectin (Gibco, A14700)
- Media TeSR-E8(Stem Cell Technol, ST05940)
- Passage (Cell dissociation) EDTA

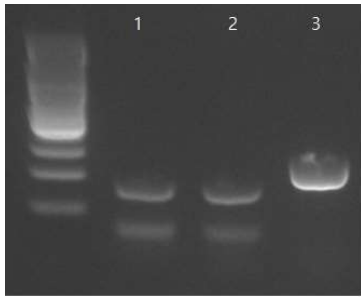
Description of the hPSC

- Parental Cell human primary urine-derived cells
- Reprogram Sendai virus (CytoTune-iPS Reprogramming kit, Invitrogen)
OCT3/4, SOX2, KLF4, c-MYC

Reference

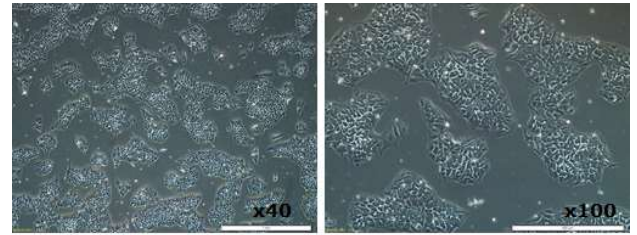
Uhm KO et al. Generation of human induced pluripotent stem cells from urinary cells of a healthy donor using a non-integration system. Stem Cell Res 2017 May;21:44-46.

Mycoplasma contamination test



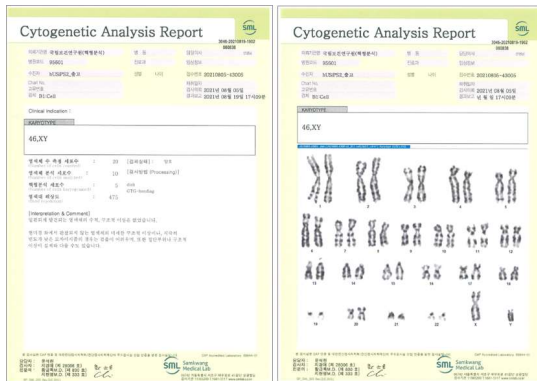
e-Mycoplasma Test PCR	
1	hUSiPS2_출고 (P33)
2	NC
3	PC

Cell morphology

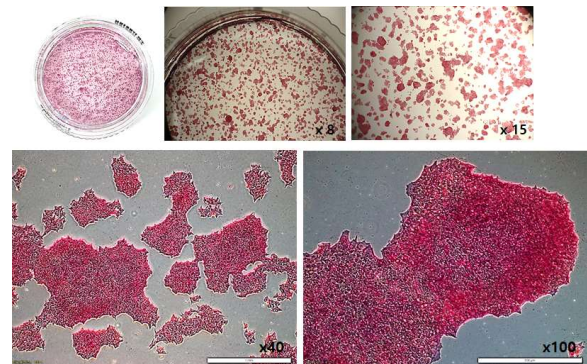


hUSiPS2 P26 d4 (21.06.13)
Xeno-free, Vitronectin, TeSR8, 35mm dish

Karyotype



AP staining

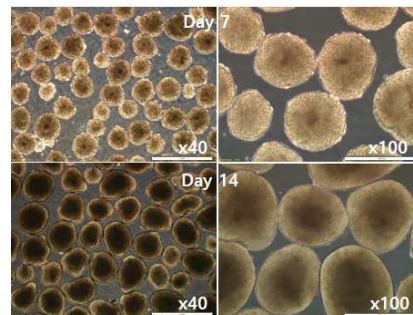


Microbial contamination test



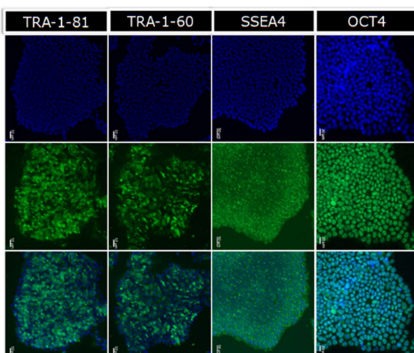
Differentiation

EB formation (EB14d) <qRT-PCR>



GENE	CT mean
PAX6	24.3
NR2F2	29.7
EMX20S	27.1
T	35.0
HAND1	31.8
ITGA8	35.5
HNF3B	33.3
AFP	Undetermined
IHH	32.4

Stem cell marker gene expression <ICC>



<qRT-PCR>

GENE	CT mean
NANOG	24.5
Oct4	28.2
SOX2	25.7
TERT	28.8
TDGF1	22.3
DNMT3B	22.0
GABRB3	25.4
GDF3	28.1
REX1	26.1
GAPDH	21.4

Teratoma formation

