

# Characterization of hPSC

<b>Cell Line Name</b>	<b>CMC-hiPSC-011</b>			
<b>Type of Cell Line</b>	<b>hiPSC</b>			
<b>Depositor (Institution)</b>	<b>Catholic University of Korea</b>			
<b>Passage #</b>	<b>p31*</b>			
<b>Day of Cell Freezing</b>	<b>20220919*</b>			
<b>Analysis</b>	<b>Result</b>	<b>Passage#</b>	<b>Day of analysis</b>	
Cell viability	Pass (93.5±3.9%)	p31	20220927	
Authentication (STR)	Pass	p31	20221019	
HLA genotype	HLA-A *11:01 *11:01	p31	20221021	
	HLA-B *15:01 *15:01			
	HLA-DRB1 *04:06 *04:06			
ABO genotype	OO	p31	20221021	
Mycoplasma test (PCR)	Pass	p31	20221011	
Cell attachment and colony morphology	Pass	p31	20220923	
Microbial contamination test (Virus, Fungi, bacteria)	Pass	p31	20221026	
Karyotype (G-banding)	46,XY	p31	20220927	
CNV analysis (CMA)	Not-detected (arr(X,Y)x1,(1-2)x2)	p31	20221115	
<b>Stem Cell Marker Expression</b>				
· AP staining	Pass (Positive)	p31	20220923	
· ICC	Pass (Positive)	p31	20220923	
· qRT-PCR	Pass (Positive)	p31	20220926	
<b>Differentiation Marker Expression</b>				
· EB formation	Pass (EB14d)	p31	20221013	
· qRT-PCR	Pass (Positive)	p31	20221013	
· Teratoma formation	Pass	p31	20200505	

\* 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/Gentle Cell Dissociation Reagent (Stem cell Technol, 07174)

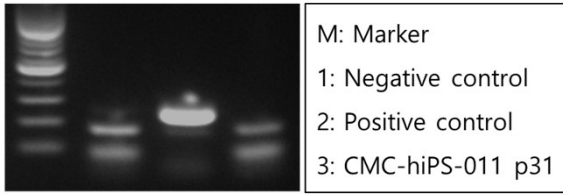
## Description of the hPSC

- Parental Cell Cord Blood Cell
- Reprogram Sendai virus (CytoTune-iPS Reprogramming kit, Invitrogen)  
OCT3/4, SOX2, KLF4, c-MYC

## Reference

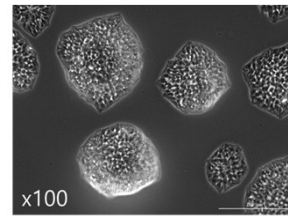
Rim YA et al. Recent progress of national banking project on homozygous HLA-typed induced pluripotent stem cells in South Korea. J Tissue Eng Regen Med. 2018 Mar;12(3):e1531-e1536.

### Mycoplasma contamination test



결과: Pass

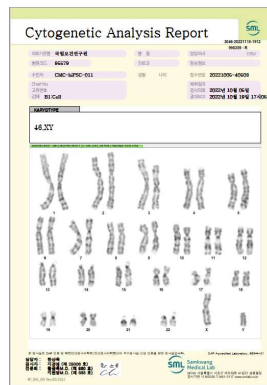
### Cell attachment & Morphology



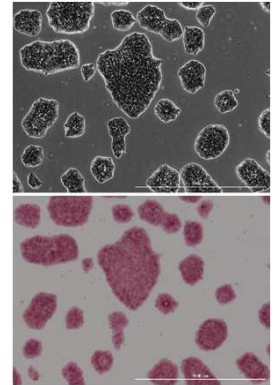
### Microbial contamination test

항생제	배양기간(일)	결과
Penicillin	7	Pass
CMC-hiPS-011	14	Pass
Clonidine	7	Pass
DMEM	7	Pass

### Karyotype

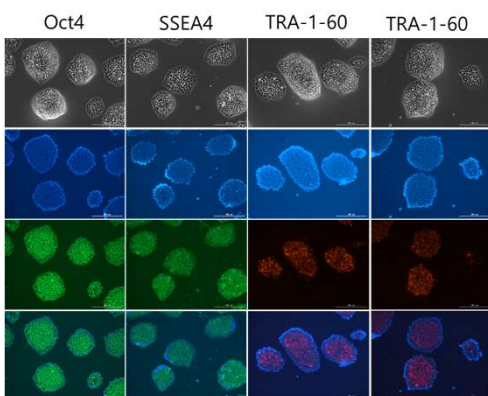


### AP staining



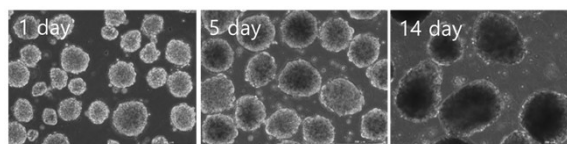
### Stem cell marker gene expression

<ICC>

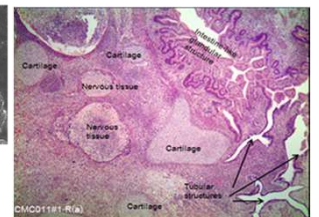


### Differentiation

<EB formation>



Teratoma formation



<qRT-PCR>

Gene	Ct mean
NANOG	22.0
OCT4	26.4
SOX2	23.6
TERT	26.7
TDGF1	20.0
DNMT3B	21.6
GABRB3	21.6
GDF3	25.0
REX1	35.4
GAPDH	17.2

<qRT-PCR>

Gene	CT mean
PAX6	22.78
NR2F2	24.78
EMX20S	26.39
HNF3B	27.00
AFP	31.26
IHH	27.19
T	27.35
HAND1	23.98
ITGA8	22.53
GAPDH	17.84

