

Characterization of hPSC

Cell Line Name	CMC-hiPSC-005		
Type of Cell Line	hiPSC		
Depositor (Institution)	Catholic University of Korea		
Passage #	p20*		
Day of Cell Freezing	20170717*		
Analysis	Result	Passage#	Day of analysis
Cell viability	Pass (89.8±3.6%)	p22	20170919
Authentication (STR)	Pass	p22	20170919
Mycoplasma test (PCR)	Pass	p22	20170919
Cell attachment and colony morphology	Pass	p17	20170713
Microbial contamination test (Virus, Fungi, bacteria)	Pass	p20	20170921
Karyotype (G-banding)	46,XX,del(4)(q35)	p22	20170919
CNV analysis (CNV_Chip)	4q35.1(loss)	p20	20171117
Stem Cell Marker Expression			
· AP staining	Pass (Positive)	p21	20170725
· ICC	Pass (Positive)	p20	20170901
· qRT-PCR	Pass (Positive)	p20	20170919
Differentiation Marker Expression			
· EB formation	Pass (EB14d)	p20	20170717
· qRT-PCR	Pass (Positive)	p20	20170915

* Freezing media : mFreSR (Stem Cell Technol, #05854, #05855)

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)

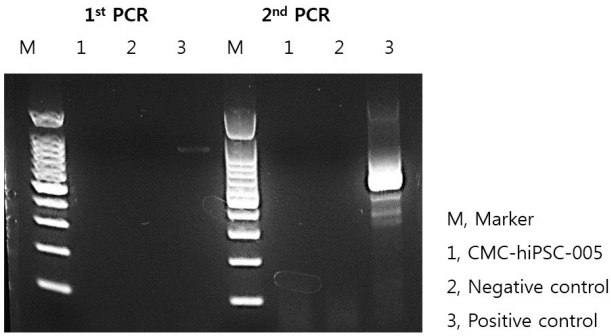
Description of the hPSC

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

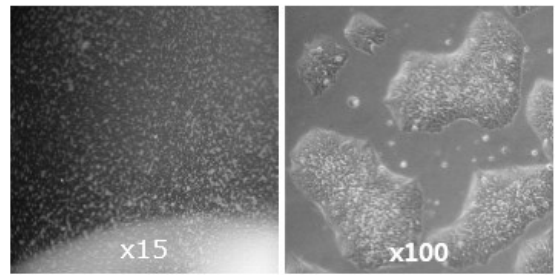
Reference

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



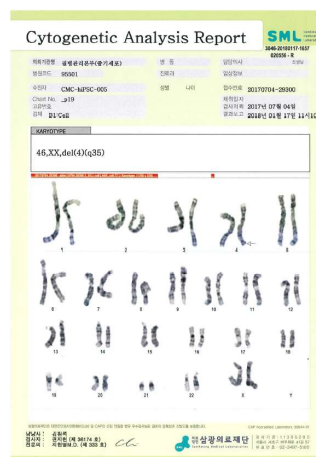
Cell attachment & Morphology



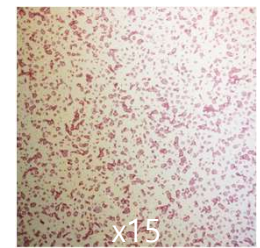
Microbial contamination test

항목	결과	비고
CMC-hiPSC-005	음성	20170819-0908
CMC-hiPSC-005	음성	20170819-0910
CMC-hiPSC-005	음성	20170819-0911
CMC-hiPSC-005	음성	20170819-0912
CMC-hiPSC-005	음성	20170819-0913
CMC-hiPSC-005	음성	20170819-0914
CMC-hiPSC-005	음성	20170819-0915
CMC-hiPSC-005	음성	20170819-0916
CMC-hiPSC-005	음성	20170819-0917
CMC-hiPSC-005	음성	20170819-0918
CMC-hiPSC-005	음성	20170819-0919
CMC-hiPSC-005	음성	20170819-0920
CMC-hiPSC-005	음성	20170819-0921
CMC-hiPSC-005	음성	20170819-0922
CMC-hiPSC-005	음성	20170819-0923
CMC-hiPSC-005	음성	20170819-0924
CMC-hiPSC-005	음성	20170819-0925
CMC-hiPSC-005	음성	20170819-0926
CMC-hiPSC-005	음성	20170819-0927
CMC-hiPSC-005	음성	20170819-0928
CMC-hiPSC-005	음성	20170819-0929
CMC-hiPSC-005	음성	20170819-0930

Karyotype

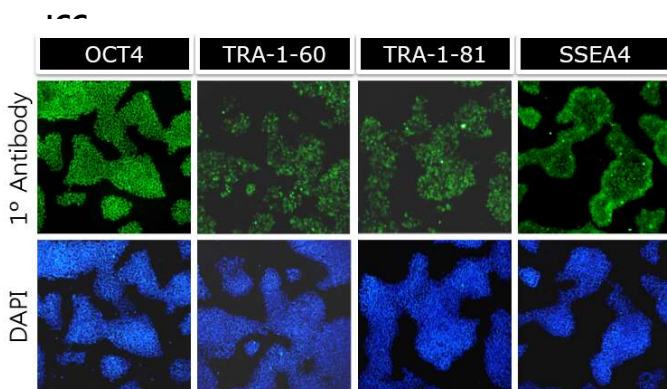


AP staining



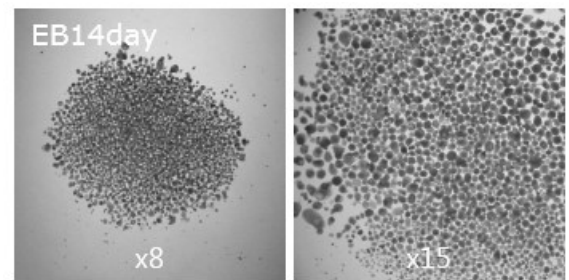
46,XX, del(4)(q35)

Stem cell marker gene expression



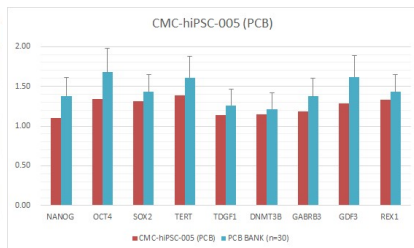
Differentiation marker gene expression

<EB formation>



<qRT-PCR>

GENE	CTmean
NANOG	23.15
OCT4	28.17
SOX2	27.55
TERT	29.12
TDGF1	23.91
DNMT3B	24.14
GABRB3	25.00
GDF3	27.04
REX1	28.01
GAPDH	21.05
ACTB	20.66



<qRT-PCR>

GENE	CTmean
PAX6	29.87
SOX1	37.77
HNF3B	33.01
AFP	28.94
T	32.94
MYOG	36.35
ACTB	27.21
GAPDH	26.07

