

Characterization of hPSC

Cell Line Name	PB01-EiPS21(Ruby2)		
Alternative Name	PB01-EiPS21(CAG-Ruby2)		
Type of Cell Line	hiPSC		
Depositor (Institution)	Korea National Institute of Health		
Passage #	p43*		
Day of Cell Freezing	20221111		
Analysis	Result	Passage #	Day of analysis
Cell viability	Pass (85.3±0.5%)	p45	20221116
Authentication (STR)	Pass	p45	20221209
Mycoplasma test (PCR)	Pass	p45	20221217
Cell attachment and colony morphology	Pass Live cell# : $6.0\pm4.5\times10^6$ cells/ml	p45	20221122
Bacterial, and fungal contamination test	Pass	p46	20221224
Viral contamination test	Pass	p46	20221212
Karyotype (G-banding)	46,XY	p46	20221220
Stem Cell Marker Expression			
· AP staining	Pass (positive)	p43	20221101
· ICC	Pass (positive)	p45	20221107
· qRT-PCR	Pass (positive)	p46	20221106
Differentiation Marker Expression			
· EB formation	Pass(EB14d)	p44	20221110
· qRT-PCR	Pass (positive)	p44	20221110
Fluorescent expression (Ruby)	Pass (positive)	p43	20221110

* Freezing media : Stem-cellbanker (Zenoaq #BLC-3-1)

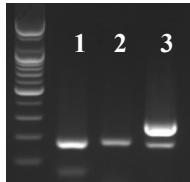
Cell Culture Condition

- Feeder(matrix) : - Vitronectin (Gibco, A14700)
- Media : - StemFlex (Gibco/Thermo-Fisher A3349401)
- Passage (Cell dissociation) - EDTA or Gentle Cell Dissociation Reagent (Stem cell Technol, 07174)
- EZPassage (Thermo-Fisher 23181010)

Genetic Modification

- Parental Cell - PB01-EiPSC21 (Korea National Institute of Health)
PBMC
- Genetic modification - CRISPR/Cas9, EGFP knock-in, AAVS1 locus

Mycoplasma contamination test



1. Negative control
2. PB01-EiPS21(Ruby2)
3. Positive control

Microbial contamination test

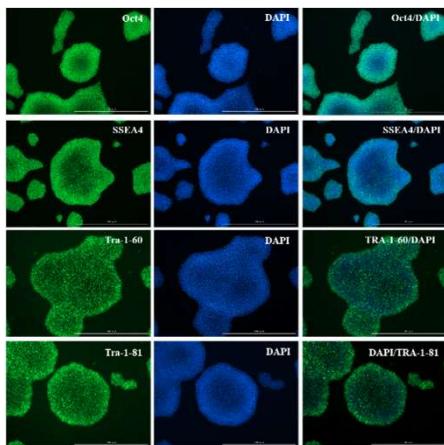


AP staining

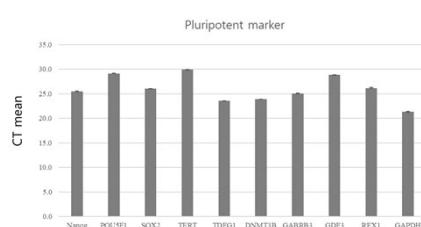


Stem cell marker gene expression

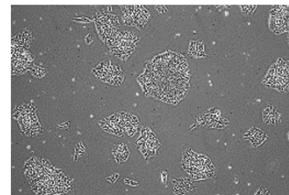
<ICC>



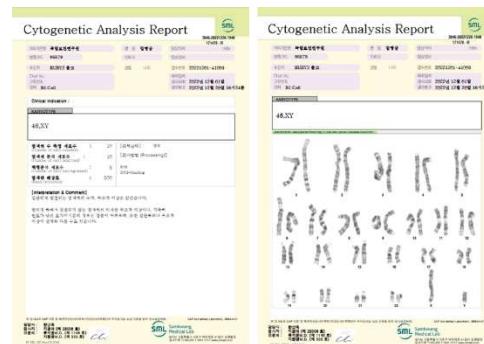
<qRT-PCR>



Cell Morphology

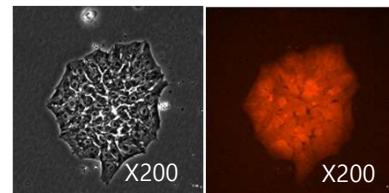


Karyotype



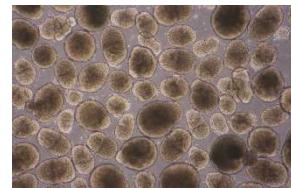
Report gene expression

phase fluorescence(ruby)

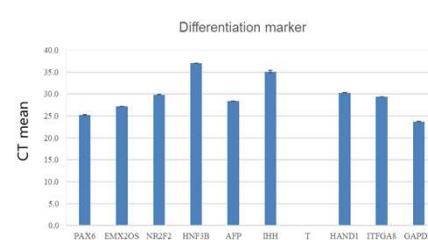


Differentiation

<EB formation>



<qRT-PCR>



Gene	Ct mean \pm SD
PAX6	25.2 \pm 0.1
EMX2OS	27.2 \pm 0.0
NR2F2	29.8 \pm 0.1
HNF3B	37.0 \pm 0.0
APP	28.4 \pm 0.1
BHLH	35.1 \pm 0.3
T	Not detected
HAND1	30.3 \pm 0.0
ITFGA8	29.4 \pm 0.0
GAPDH	23.7 \pm 0.0