

Characterization of hPSC

Cell Line Name	PB01-EiPS21-EGFP04		
Type of Cell Line	hiPSC		
Depositor (Institution)	Korea National Institute of Health		
Passage #	p41*		
Day of Cell Freezing	20221108		
Analysis	Result	Passage #	Day of analysis
Cell viability	Pass(32.7±1.0%) Live cell# : 5.83x10 ⁵ cell/ml	p41	20221128
Authentication (STR)	Pass	p42	20221208
Mycoplasma test (PCR)	Pass	p42	20221227
Cell attachment and colony morphology	Pass	p42	20221128
Bacterial, and fungal contamination test	Pass	p42	20221220
Viral contamination test	Pass	p42	20221208
Karyotype (G-banding)	46,XY	p42	20221213
Stem Cell Marker Expression			
· AP staining	Pass (Positive)	p41	20211229
· ICC	Pass (Positive)	p41	20210624
· qRT-PCR	Pass (Positive)	p41	20220104
Differentiation Marker Expression			
· EB formation	Pass (EB14d)	p40	20210729
· qRT-PCR	Pass (Positive)	p40	20210804
GFP Expression	Pass (Positive)	p40	20210729

* Freezing media: STEMCELL BANKER (Zenoaq #BLC-3-1)

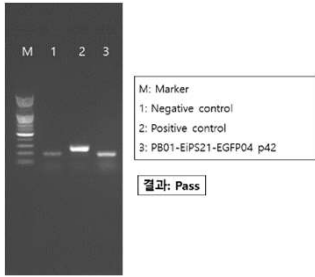
Cell Culture Condition

- 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

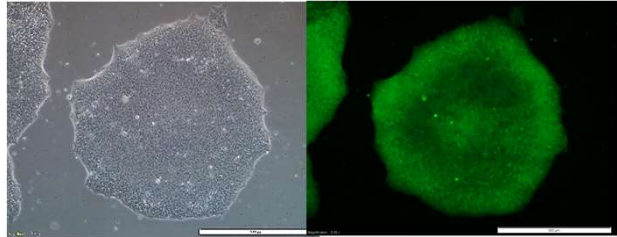
- Parental Cell - PB01-EiPSC21 (Korea National Institute of Health)
PBMC
- Genetic modification - CRISPR/Cas9, EGFP knock-in, AAVS1 locus

Mycoplasma contamination test



Cell attachment, Morphology & GFP expression

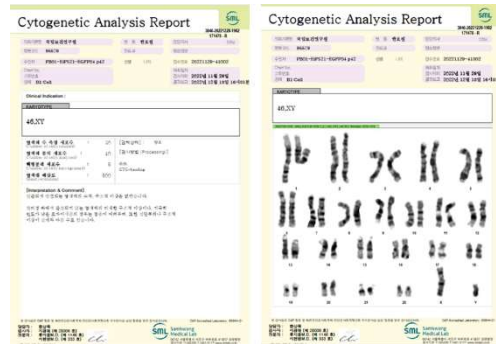
<Phase-contrast> <Fluorescence-GFP>



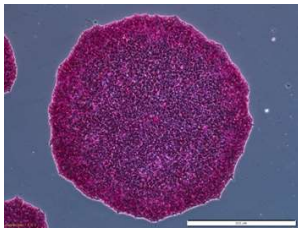
Microbial contamination test



Karyotype

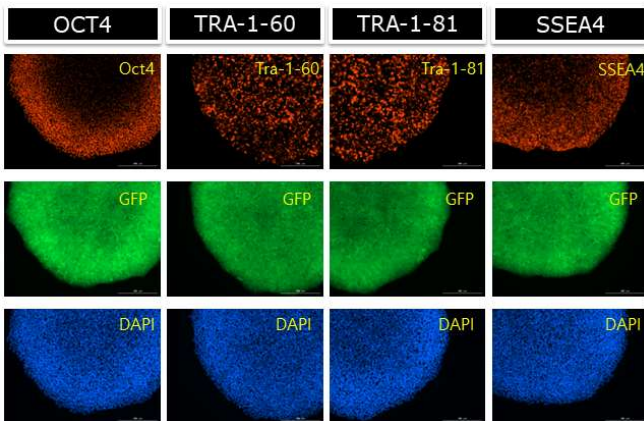


AP staining



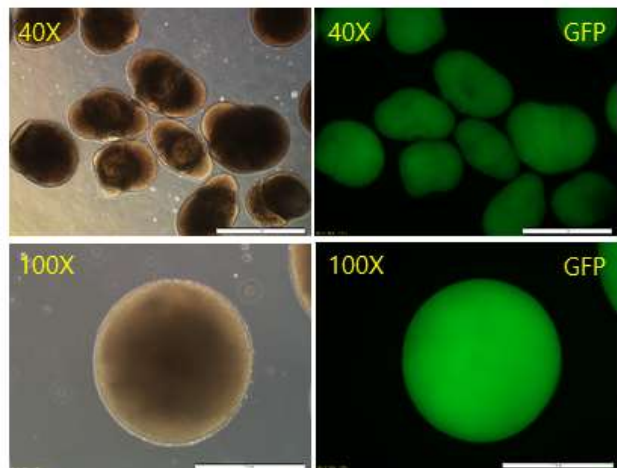
Stem cell marker gene expression

<ICC>>



Differentiation

EB 14day

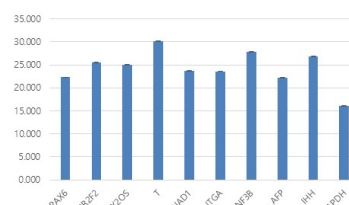


<qRT-PCR>

Gene	Ct mean
Nanog	23.999
OCT4	29.758
Sox2	23.962
TERT	27.733
TDGF1	22.377
DNMT3B	21.854
GABRB3	23.782
GDF3	27.833
REX1	24.046
GAPDH	19.657



<qRT-PCR>



Gene	Ct mean
PAX6	22.282
NR2F2	25.528
EMX2OS	25.056
T	30.187
HAND1	23.727
ITGA8	23.603
HNF3B	27.764
AFP	22.124
IHH	26.868
GAPDH	16.031