

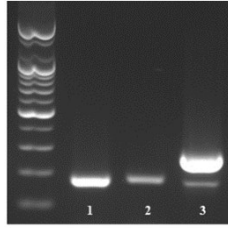
# Characterization of hPSC

<b>Cell Line Name</b>	<b>hFSiPS1_DUSP6KOA</b>			
<b>Type of Cell Line</b>	<b>hiPSC</b>			
<b>Depositor (Institution)</b>	<b>Korea National Institute of Health</b>			
<b>Passage #</b>	<b>p113</b>			
<b>Day of Cell Freezing</b>	<b>20221027</b>			
<b>Analysis</b>	<b>Result</b>	<b>Passage #</b>	<b>Day of analysis</b>	
Cell viability	Pass(72%)	p113	20221027	
Authentication (STR)	Pass	p114	20221125	
Mycoplasma test (PCR)	Pass	p113	20221028	
Cell attachment and colony morphology	Pass	p113	20221031	
Microbial test (Viral, bacterial, and fungal contamination)	Pass	p114	20221125	
Karyotype (G-banding)	46,XY	p111	20221121	
HLA genotype	HLA-A *02:07 *24:02	p110	20220531	
	HLA-B *13:02 *35:01			
	HLA-DRB1 *01:01 *07:01			
ABO genotype	AA	p110	20220526	
CNV	Gain (20q11.21)x3	p110	20220511	
<b>Stem Cell Marker Expression</b>				
· AP staining	Pass (positive)	p110	20220602	
· ICC	Pass (positive)	p113	20220704	
· qRT-PCR	Pass (positive)	p113	20220513	
<b>Differentiation Marker Expression</b>				
· EB formation	Pass (EB14d)	p109	20220608	
· qRT-PCR	Pass (positive)	p109	20220613	
* Freezing media : Stem-cellbanker (Zenoaq #BLC-3-1)				
<b>Cell Culture Condition</b>				
· Feeder material	· Vitronectin (Gibco, A14700)			
· Media	· TeSR-E8(Stem Cell Technol, ST05940)			
· Passage(Cell dissociation)	· EDTA			
<b>Cell Line Information</b>				
· Parental Cell	· hFSiPS1 (Korea National Institute of Health) human dermal fibroblast			
· Reprogramming	· Method : Sendai virus (CytoTune-iPS Reprogramming kit, Invitrogen)			
	· Induction Genes : OCT3/4, SOX2, KLF4, c-MYC			
<b>Specification</b>				
· Genetic modification	· CRISPR/Cas9 knock-out			
· Deleted gene	· DUSP6			
* hFSiPS1_DUSP6KO subline.				

**Reference**

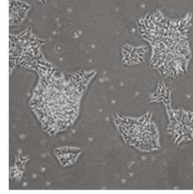
Yoo DH et al. DUSP6 is a memory retention feedback regulator of ERK signaling for cellular resilience of human pluripotent stem cells in response to dissociation. Sci Rep. 2023 Apr 7;13(1):5683

**Mycoplasma test**

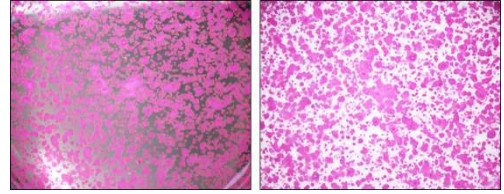


1. Negative control  
2. hFSiPS1\_DUSP6KOA(종교)  
3. Positive control

**Cell morphology**



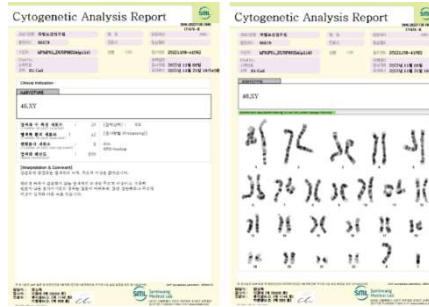
**AP staining**



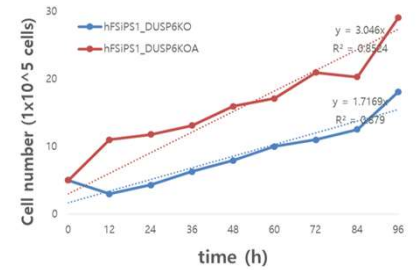
**Microbial contamination test**



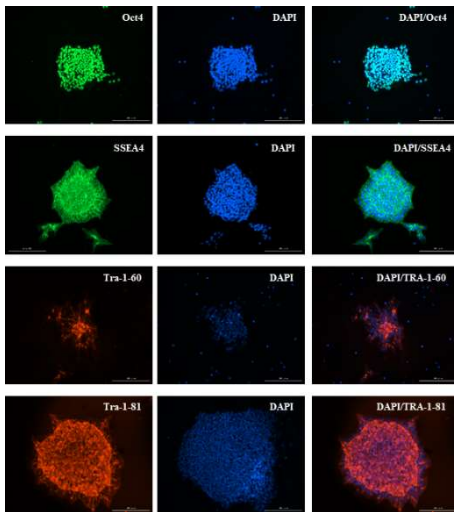
**Karyotype**



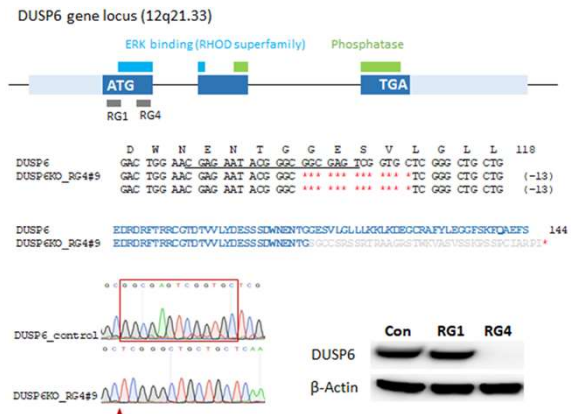
**Cell growth**



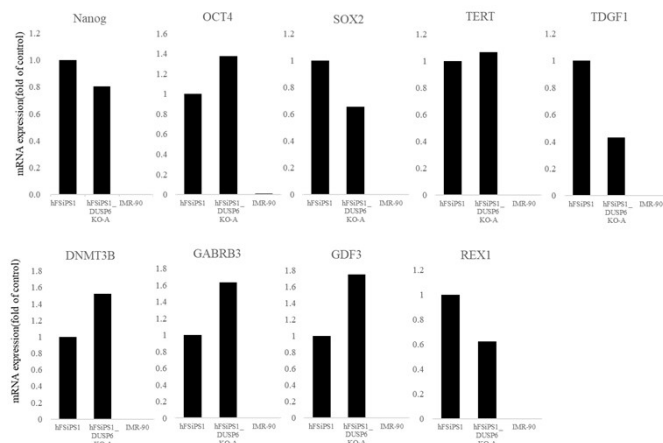
**Stem cell marker gene expression <ICC>**



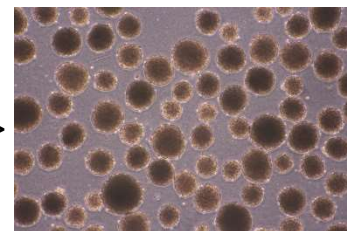
**Gene knock out**



**Stem cell marker gene expression <qRT-PCR>**



**<EB14d>**



**Differentiation marker gene expression <qRT-PCR>**

