人類疾病誘導型多潛能幹細胞服務聯盟
Human Disease iPSC Service Consortium

人類誘導型多潛能幹細胞
細胞品質與特性鑑定報告

IBMS-iPSC-087-03

鑑定單位:中央研究院生物醫學科學研究所 iPSC Core

2022 年 4 月 20日

Resource Information

Cell name	IBMS-iPSC-087-03
Alternative name of stem cell line	-----
Institution	人類疾病誘導型多潛能幹細胞服務聯盟-中研院 IBMS
Type of cell line	□ Normal iPSC ■ Disease iPSC
Associated disease	Occult Macular Dystrophy
Origin	Human
Additional origin info	Age: 40 Sex: Female
Cell Source	□ Fibroblasts ■ Blood □ _____
Clonality	■ Clonal □ Mixed
Method of reprogramming	■ Sendai V. □ Episomal □ mRNA □ RetroV □ _____
Genetic Modification	□ YES ■ NO
Biosafety Level	□ BSL1 ■ BSL2 □ BSL3 □ BSL4
Note	-----

Characterization and validation of iPSC

BCRC number	N/A		
Cell name	**IBMS-iPSC-087-03**		
Classification	**Testing Method**	**Description**	**Results**
Morphology	Photography	Normal morphology	Pass
Pluripotency Markers	Immunocytochemistry	Assess staining/expression of pluripotency markers: OCT4, SOX2, SSEA-4, TRA 1-60.	Pass
	Flow cytometry	Assess intracellular & cell surface markers (>80%). OCT4, SOX2, NANOG, SSEA-4, TRA 1-60, TRA-1-81.	Pass
	RT-PCR (pluripotency markers)	Assess expression of pluripotency markers: OCT4, SOX2, NANOG.	Pass
	RT-PCR (transgene)	Assess retention of Sendai virus in iPSCs.	Transgene-free, Pass
Genome Stability	Karyotyping (G-banding)	46,XX [20] Cytogenetic analysis showed the presence of chromosomally normal metaphase cells only.	Normal karyotype
Cell Identity	STR analysis	Tested 16 sites, 100% match using Tanabe algorithm, all matched.	Pass
Contaminant Testing	Mycoplasma	Mycoplasma testing by luminescence and direct culture.	Negative, Pass
	Sterile assay	Sterile assay by TSB & FTM.	Negative, Pass
Differentiation potential	Embryoid body formation and immunocytochemistry	Embryoid body formation: proof of three germ layers formation *in vitro*. Alpha-fetoprotein (AFP) for endoderm, smooth muscle actin (SMA) for mesoderm, and beta-III tubulin (TUJ1) for ectoderm.	Pass
	Teratoma formation and HE staining	Teratoma formation: proof of three germ layers formation *in vivo*.	Pass