CEDARS-SINAI
BOARD OF GOVERNORS
REGENERATIVE MEDICINE INSTITUTE

iPSC Line: EDi027-A

Cedars-Sinai RMI Induced Pluripotent Stem Cell (iPSC) Core Certificate of Analysis (COA)

Cell Line Name	EDi027-A
CS Vial ID #(s)	955456-57
Date Vialed	5/3/2017
Passage Number	11

The following testing specifications have been met for the specified cell line:

Test Description	Test Specification	Result
Mycoplasma	No contamination detected	Pass
Alkaline Phosphatase Staining	Positive AP staining	Pass
Karyotype by G-Banding	Normal Karyotype	Pass
Pluripotency		
PrimeView Global Gene Expression Profile Assay (PluriTest)	Pluripotency score ≥ 20 and novelty score ≤ 1.6	Pass
Immunocytochemistry (IF-IC)	OCT3/4, NANOG, SOX2, TRA-1-60, TRA-1-81, SSEA4	Pass
TaqMan® hPSC Scorecard™ Assay	Confirm appropriate expression of self-renewal factors	Pass
Differentiation		
EB Formation	Successful Embryoid Body (EB) formation after 14 days	Pass
TaqMan® hPSC Scorecard™ Assay	Tri-lineage differentiation potential *Endoderm, Ectoderm and Mesoderm*	Pass
Reprogramming Plasmid Integration		
Genomic DNA PCR	Confirm the presence or absence of exogenous reprogramming plasmids	Pass
Parent Cell Line Lineage Determination		
TCRB + TCRG T-Cell Clonality Assay (Blood derived cell lines only)	Confirm presence or absence of clonal T-cell receptor beta chain and gamma chain gene rearrangements in iPSCs	Confirmed
Cell Line Authentication		
STR Analysis	Confirm identity matching score is above 80%	Confirmed

DHRUV SAREEN, Ph.D
CORE DIRECTOR

CEDARS-SINAI
BOARD OF GOVERNORS
REGENERATIVE MEDICINE INSTITUTE

iPSC Line: EDi027-A

CONTACT INFORMATION:

Core Director:
Dhruv Sareen, Ph.D.

Phone Number:
(310) 423-7074

Email Address:
iPSCCore@cshs.org

Institution:
Cedars-Sinai RMI Induced Pluripotent Stem Cell Core

Address:
8700 Beverly Blvd.
AHSP 8500
Los Angeles, CA 90048
USA

PARENT LINE IDENTIFICATION AND INFORMATION:

Parent Cell Line: _____

Age at Tissue Sampling: 79.65

Phenotypic Sex: __ Male ✔ Female

Clinical Diagnosis (if known): _____

Specific Mutations (if known): _____

Additional Information:

REPROGRAMMING INFORMATION:

iPSC Line Name: EDi027-A

Vial ID(s): 955456-57

Starting Cell Type: ✔ PBMC __ Fibroblast __ Other: _____

Reprogramming Method: ✔ Episomal __ Sendai Virus __ Other: _____

Reprogramming Factors: ✔ Oct3/4 ✔ Sox2 ✔ KLF4 ✔ L-Myc ✔ shp53 ✔ Lin28

✔ Other: SV40LT

CULTURING INFORMATION:

MEDIUM:

Growth Medium: mTeSR 1

Company: STEMCELL Technologies

Catalog #: 85850

CEDARS-SINAI
BOARD OF GOVERNORS
REGENERATIVE MEDICINE INSTITUTE

iPSC Line: EDi027-A

SUBSTRATE:

Substrate Specification:	Matrigel® Growth Factor Reduced (GFR) Basement Membrane Matrix, *LDEV-Free
Company:	Corning Lifesciences
Catalog #:	354230
Coating Concentration:	1.0mg per 6-well plate or 0.17mg per well

PASSAGING METHOD:

Method:	STEMPRO EZPassage Tool	Versene (EDTA)	ReLeSR
Passaging Frequency:	7 days	7 days	7 days
Average Split Ratio:	1:6	1:9	1:6
Cell Line Preferred Method:			

Rate of Differentiation: __ High (≥50%) ✔ Moderate (30-40%) __ Low (≤20%)

Freezing Media:	CryoStor CS 10
Recovery Media:	mTeSR1

CHARACTERIZATION OF UNDIFFERENTIATED PLURIPOTENT CELL LINE:

G-BAND KARYOTYPE:

Performed By:	Cedars-Sinai Department of Pathology and Laboratory Medicine
Passage Number:	6
Karyotyping Analysis & Results:	46,XX
Interpretation:	Normal female karyotype
Comments:	Cytogenetic analysis using G-banding at the 450-475 band level of resolution on slides of these cultured cells revealed a 46,XX normal female karyotype. No consistent numerical or structural abnormality wasobserved, and there was no demonstrable clinically significant abnormality.

PLURITEST:

Final Result: ✔ Pass __ Fail __ Further Evaluate __ TBD __ N/A

Pluripotency Score:	30.504
Novelty Score:	1.353

CEDARS-SINAI
BOARD OF GOVERNORS
REGENERATIVE MEDICINE INSTITUTE

iPSC Line: EDi027-A

IMMUNOCYTOCHEMISTRY:

	AP	SSEA-4	Tra-1-60	Tra-1-81	Nanog	Oct4	Sox2
Pluripotency Marker:	✔	✔	✔	✔	✔	✔	✔

PLASMID INTEGRATION ANALYSIS:

Absence of plasmid integration confirmed by gDNA PCR:

	EBNA Negative	EBNA Positive	TBD
Result:	✔		

Passage #: 21

CHARACTERIZATION OF DIFFERENTIATION POTENTIAL:

This cell line has been assessed for differentiation potential by:

✔ 14 Day Embryoid Body Formation ✔ TaqMan® hPSC Scorecard™ Assay __ PCR

hPSC SCORECARD DATA ANALYSIS:

	Self-Renewal	Endoderm	Ectoderm	Mesoderm
iPSC (Day 0):	Positive	Negative	Borderline	Negative
Score:	0.18	-0.75	0.61	0.1
EBs (Day 14):	Negative	Positive	Positive	Positive
Score:	-6.07	1.78	1.72	3.29

Comments: The iPSCs are borderline for ectoderm.

PARENT CELL LINE LINEAGE DETERMINATION:

(Blood derived cell lines only)

	TCR-αβ		TCR-γδ	
T-Cell Clonality Assay:	__ Positive	✔ Negative	__ Positive	✔ Negative

Final Result: __ T-Cell Derived ✔ Non T-Cell Derived __ TBD __ N/A

CEDARS-SINAI
BOARD OF GOVERNORS
REGENERATIVE MEDICINE INSTITUTE

iPSC Line: EDi027-A

CELL LINE AUTHENTICATION:

Parent Cell Line:

AMEL	CSF1PO	D13S317	D16S539	D5S818	D7S820	TH01	TPOX	vWA
X	12	9, 11	9, 13	11, 12	10, 11	7, 9.3	8, 11	16, 17

iPSC Line: EDi027-A

AMEL	CSF1PO	D13S317	D16S539	D5S818	D7S820	TH01	TPOX	vWA
X	12	9, 11	9, 13	11, 12	10, 11	7, 9.3	8, 11	16, 17

% Identity Match: 100%

IDEXX IBR #(s): #30220-2017 #9

ADDITIONAL INFORMATION: