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BOARD OF GOVERNORS
REGENERATIVE MEDICINE INSTITUTE

iPSC Line: EDi029-A

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

Cell Line Name	EDi029-A
CS Vial ID #(s)	961237, 961238
Date Vialed	7/28/2017
Passage Number	20

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

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CONTACT INFORMATION:

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PARENT LINE IDENTIFICATION AND INFORMATION:

Parent Cell Line:

Age at Tissue Sampling: 80.13

Phenotypic Sex: ✔ Male ☐ Female

Clinical Diagnosis (if known):

Specific Mutations (if known):

Additional Information: Healthy Aging

REPROGRAMMING INFORMATION:

iPSC Line Name: EDi029-A

Vial ID(s): 961237, 961238

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

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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:	19
Karyotyping Analysis & Results:	46,XY
Interpretation:	Normal male karyotype.
Comments:	Cytogenetic analysis using G-banding at the 400-425 band level of resolution on slides of these cultured cells revealed a 46,XY normal male karyotype. No consistent numerical or structural abnormality was observed, and there was no demonstrable clinically significant abnormality.

PLURITEST:

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

Pluripotency Score:	38.151
Novelty Score:	1.381

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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 #: 23

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	Negative	Negative
Score:	0.75	-0.81	0.33	0.37
EBs (Day 14):	Negative	Positive	Positive	Positive
Score:	-5.16	1.96	2.13	3.91

Comments:

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

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CELL LINE AUTHENTICATION:

Parent Cell Line:

AMEL	CSF1PO	D13S317	D16S539	D5S818	D7S820	TH01	TPOX	vWA
X, Y	10	8, 12	11	11, 13	10, 12	6, 7	8, 11	15, 17

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AMEL	CSF1PO	D13S317	D16S539	D5S818	D7S820	TH01	TPOX	vWA
X, Y	10	8, 12	11	11, 13	10, 12	6, 7	8, 11	15, 17

% Identity Match: _____

IDEXX IBR #(s): _____

ADDITIONAL INFORMATION: