

Thaw and Culture Details

Cell Line Name	UCSD139i-85-1						
WiCell Lot Number	WB55345						
Provider	University of California, San Diego – Dr. Kelly Frazer						
Banked By	WiCell						
Thaw and Culture Recommendations	WiCell recommends thawing 1 vial into 3 wells of a 6 well plate.						
Culture Platform	Feeder Independent						
	Medium: mTeSR™1						
	Matrix: Matrigel®						
Protocol	WiCell Feeder Independent mTeSR [™] 1 Protocol						
Passage Number	p18 These cells were cultured for 17 passages prior to freeze and post reprogramming. WiCell adds +1 to the passage number to best represent the overall passage number of the cells at thaw.						
Date Vialed	15-December-2016						
Vial Label	UCSD139i-85-1 p18 WB55345						
Biosafety and Use Information	Appropriate biosafety precautions should be followed when working with these cells. The end user is responsible for ensuring that the cells are handled and stored in an appropriate manner. WiCell is not responsible for damages or injuries that may result from the use of these cells. Cells distributed by WiCell are intended for research purposes only and are not intended for use in humans.						

Testing Performed by WiCell

Test Description	Test Provider	Test Method	Test Specification	Result
Karyotype by G-banding	WiCell	SOP-CH-003	Expected karyotype	See Report
Post-Thaw Viable Cell Recovery	WiCell	SOP-CH-305	≥ 15 Undifferentiated Colonies, ≤ 30% Differentiation and recoverable attachment after passage	Pass
Identity by STR	ity by STR UW Translational Research Initiatives in Pathology Laboratory		Defines profile	Pass
Sterility	Steris	ST/07	Negative	Pass
Mycoplasma	WiCell	SOP-QU-004	Negative	Pass

Testing Reported by Provider

The Provider stated that some or all of the additional analyses listed below may have been performed for this cell line. For more information, publication and dbGaP links, where available, are provided on the cell line specific web page on the WiCell website.

- Illumina® HumanCoreExome BeadChip Array
- RNA-Seq
- Flow Cytometry (SSEA-4, Tra 1-81)
- Infinium® Expanded Multi-Ethnic Genotyping Array (MEGAEX)

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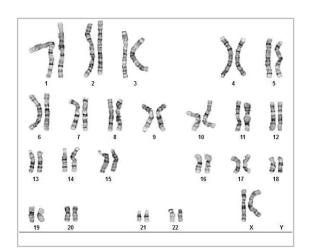
Approval Date	Quality Assurance Approval			
04-January-2017	10/25/0018 XIKG Quality Assurance Signed by Gas, Kena			

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The material provided under this certificate has been subjected to the tests specified and the results and data described herein are accurate based on WiCell's reasonable knowledge and belief. Appropriate Biosafety Level practices and universal precautions should always be used with this material. For clarity, the foregoing is governed solely by WiCell's Terms and Conditions of Service, which can be found at http://www.wicell.org/privacyandterms.



Date Reported: Tuesday, August 14, 2018 Cell Line: UCSD139i-85-1-WB55345 13933 Passage#: 18 Date of Sample: 8/8/2018 Specimen: Human IPS Results: 46,XX



Cell Line Sex: Female Reason for Testing: lot release testing
Investigator: WiCell
Cell: 8
Slide: G02
Slide Type: Karyotype
Total Counted: 20
Total American O

Total Analyzed: 8 Total Karyogrammed: 4 Band Resolution: 500 - 550

Interpretation:

This is a normal karyotype; no clonal abnormalities were detected at the stated band level of resolution.

Completed by: CG(ASCP)
Reviewed and Interpreted by: PhD, FACMG

A signed copy of this report is available upon request.

Date:	Sent By:	Sent To:	QC Review By:
Dale	Sent by		QC Review by.

Limitations: This assay allows for microscopic visualization of numerical and structural chromosome abnormalities. The size of structural abnormality that can be detected is >3-10Mb, dependent upon the G-band resolution obtained from this specimen. For the purposes of this report, band level is defined as the number of G-bands per haploid genome. It is documented here as "band level", i.e., the range of bands determined from the four karyograms in this assay. Detection of heterogeneity of clonal cell populations in this specimen (i.e., mosaicism) is limited by the number of metaphase cells examined, documented here as "# of cells counted".

This assay was conducted solely for listed investigator/institution. The results of this assay are for research use only. Unless otherwise mutually agreed in writing, the services provided to you hereunder by WiCell Research Institute, Inc. ("WiCell") are governed solely by WiCell's Terms and Conditions of Service, found at www.wicell.org/privacyandterms. Any terms you may attach to a purchase order or other document that are inconsistent, add to, or conflict with WiCell's Terms and Conditions of Service are null and void and of no legal force or effect.



HISTOLOGY - IHC - MOLECULAR - IMAGING

Department of Pathology and Laboratory Medicine TRIP Laboratory (Molecular) http://www.pathology.wisc.edu/research/trip

Sample Report: 13933-STR Sample Name on Tube: 13933-STR 83.0 ng/μL, (A260/280=1.88) Sample Type: Cells Cell Count: ~2 million cells **Requestor:** WiCell Research Institute Quality Department

Short Tandem Repeat

Analysis

WiCell[®] info@wicell.org (888) 204-1782

Sample Date: N/A Receive Date: 08/27/18 Assay Date: 08/29/18 File Name: STR 180830 wmr Report Date: 09/05/18

STR Locus	STR Genotype Repeat #	STR Genotype
FGA	16–18,18.2,19,19.2,20,20.2,21,21.2,22, 22.2, 23, 23.2, 24, 24.2, 25, 25.2, 26–30, 31.2, 43.2, 44.2,45.2, 46.2	Identifying
ТРОХ	6-13	information has been redacted to
D8S1179	7-18	protect donor
vWA	10-22	confidentiality. If
Amelogenin	X,Y	more information
Penta_D	2.2, 3.2, 5, 7-17	is required,
CSF1PO	6-15	please, contact
D16S539	5, 8-15	WiCell's Technical
D7S820	6-14	<u>Support.</u>
D13S317	7-15	
D5S818	7-16	
Penta_E	5-24	
D18S51	8-10, 10.2, 11-13, 13.2, 14-27	
D21S11	24,24.2,25,25.2,26-28,28.2,29,29.2, 30, 30.2,31, 31.2,32,32.2,33,33.2, 34,34.2,35,35.2,36-38	
TH01	4-9,9.3,10-11,13.3	
D3S1358	12-20	

<u>Results:</u> Based on the 13933-STR cells submitted by WiCell QA dated and received on 08/27/18, this sample (Label on Tube: 13933-STR) defines the STR profile of the human stem cell line UCSD139i-85-1 comprising 30 allelic polymorphisms across the 15 STR loci analyzed.

<u>Interpretation:</u> No STR polymorphisms other than those corresponding to the human UCSD139i-85-1 stem cell line were detected and the concentration of DNA required to achieve an acceptable STR genotype (signal/ noise) was equivalent to that required for the standard procedure (~1 ng/amplification reaction) from human genomic DNA. This result suggests that the 13933-STR sample submitted corresponds to the UCSD139i-85-1 stem cell line and was not contaminated with any other human stem cells or a significant amount of mouse feeder layer cells.

<u>Sensitivity</u>: Sensitivity limits for detection of STR polymorphisms unique to either this or other human stem cell lines is ~2-5%.

X RMB Digitally Signed on 09/06/18	X WMR	Digitally Signed on	09/06/18
BA TRIP Laboratory Molecular	UWHC Molecul	PhD, Director / Co-Dire ar Diagnostics Laboratory / U	

Testing was accomplished by analysis of human genetic polymorphisms at STR loci. This methodology has not yet been approved by the FDA and is for investigational use only. Acknowledge TRIP in your publications, posters & presentations. For details, see: http://www.pathology.wisc.edu/research/trip/acknowledging TRIP agrees to maintain the confidentiality of any information provided to it in connection with its performance of this STR analysis on the same conditions as set forth in paragraph 2 of WiCell's Terms and Conditions of Service (http://www.wicell.org/media.acux/1a429b84-2b54-44a4-8ad8-5c05db93dd8a).

Native Product Sterility Report



		SAMPLE #: 18020291							
WiCell		DATE RECEIVED: 06-Feb-							
504 S. Rosa Rd., Rm 101	L	TEST INITIATED: 07-Feb-1							
Madison, WI 53719		TEST COMPLETED: 21-Feb-18							
Madisuli, W133719 TEST COMPLETED. Z SAMPLE NAME / DESCRIPTION: CREM015i-SS16-1 WB66723 13311, CREM016i-SS18-1 WB66729 13314, SOX2-GFP WB66727 13315, WC005i-FX11-7 WB20338 13316, WC009i- WB17924 13317, PENN015i-668-5 DB36410 13318, PENN029i-752-3 CI 13319, PENN009i-57-52 DB35131 13320, PENN034i-322-1 DB34729 1 PENN077i-521-1 DB36597 13322, PENN125i-233-4 DB35073 13323, P 262-1 DB35081 13324, UCSD048i-52-1 WB66722 13325, UCSD208i-11 WB66730 13326, UCSD133i-79-1 WB61228 13327, UCSD152i-11-3 WB 13328, UCSD168i-22-1 WB61577 13329, UCSD170i-22-3 WB60774 133 UCSD175i-18-3 WB60837 13331, UCSD066i-67-1 WB60392 13332, UCS 35-2 WB65030 13334, UCSD117i-72-1 WB60039 13335, UCSD119i-38- WB60256 13336, UCSD125i-7-2 WB59218 13339, UCSD128i-7-5 WB60 13338, UCSD151i-11-2 WB59218 13339, UCSD128i-7-5 WB60 13338, UCSD151i-11-2 WB59218 13339, UCSD158-1 WB54174 13342, UCSD 13345, UCSD100i-36-1 WB55460 13346, UCSD129i-75-1 WB54345 13349, UCS 1 WB54407 13343, UCSD198i-23-1 WB54163 13344, UCSD098i-35-1 W 13345, UCSD100i-36-1 WB55460 13346, UCSD129i-75-1 WB54345 13349, UCS 1 WB54407 13343, UCSD138i-85-1 WB55345 13349, UCS 1 8-1 WB54899 13350, UCSD127i-104-1 WB55339 13351, UCSD206i-31 WB54794 13352, UCSD217i-115-1 WB55069 13353, UCSD218i-116-1 V 13354, UCSD094i-25-1 WB55177 13355, UCSD095i-25-2 WB5780 133 UCSD097i-34-2 WB57100 13357, UCSD113i-68-1 WB57056 13358, UCS 70-1 WB55081 13359, UCSD184i-8-1 WB55388 13360, UCSD188i-105- WB55082 13361 NA					5729 13314, H9- 5, WC009i-FX08-01 29i-752-3 DB36392 DB34729 13321, 3 13323, PENN136i- SD208i-111-1 2i-11-3 WB61663 60774 13330, 13322, UCSD099i- D119i-38-2 7-5 WB60297 60020 13340, 342, UCSD167i-99- 98i-35-1 WB55340 54795 13347, 13349, UCSD173i- SD206i-31-1 8i-116-1 WB55459 57580 13356, 13358, UCSD115i-				
PRODUCT REGISTR	ATION:	Other: Human iPS o	cells						
TEST RESULTS:	# Tested	# Positives (Growth) - Control							
TEOTOURNARDY	50	0	3 Negative						
TEST SUMMARY:	# Samples	Media Type	Volume (mL)	Incubation Temperature (° C)	Incubation Duration (Days)				
	50	TSB	40	20-25	14				
	50	FTG	40	30-35	14				
REFERENCE:		Processed according to LAB-003: Sterility Test Procedure							
METHOD VALIDATIC	N / PD #:	000053							
TEST METHODOLOG	34.	USP - Direct Transfer							
	~								

Native Product Sterility Report



COMMENTS: Sample # 18020291

REVIEWED BY 50

DATE 22 FEBIS

Specific test results may not be indicative of the characteristics of any other samples from the same lot or similar lots. This test report shall not be reproduced, except in full, without prior written approval. Liability is limited to the costs of the tests.



Mycoplasma Detection Assay Report Testing Performed by WiCell

Testing Performed by WiCell Lot Release Testing August 8, 2018 FORM SOP-QU-004.01 Version G Edition 02 Reported by: AP Reviewed by: JB BD Monolight 180

		Read	ing A	Α	Read	ling B	В	Ratio		
#	Sample Name	RLU1	RLU2	Ave	RLU1	RLU2	Ave	B/A	Result	Comments/Suggestions
1	UCSD139i-85-1-WB55345 13933	210	222	216	79	80	79.5	0.37	Negative	
2	Positive (+) Control	296	307	301.5	41666	41856	41761	138.51	Positive	
3	Negative (-) Control	629	642	635.5	72	65	68.5	0.11	Negative	

