

Thaw and Culture Details

Cell Line Name	UCSD115i-70-1						
WiCell Lot Number	WB55081						
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	p20 These cells were cultured for 19 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	UCSD115i-70-1 p20 WB55081						
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	UW Translational Research Initiatives in Pathology Laboratory	PowerPlex 16 HS System by Promega	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	946/2018 XIG Quality Assurance Signed by: Gay, Jenna			

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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: Monday, May 07, 2018 Cell Line Gender: Male Cell Line: UCSD115i-70-1-WB55081-13655 Reason for Testing: Lot release testing Passage#: 20 Date of Sample: 4/30/2018 Investigator: WiCell Specimen: Human IPS Results: 46,XY Cell: 3 Slide: G01 Slide Type: Karyotype Con and Total Counted: 20 Total Analyzed: 8 18 Total Karyogrammed: 4 Band Resolution: 475 - 600 0000

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:A signed copy of this report is available upon request.		PhD, FACMGG		
Date:	Sent By: Sent	То:	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 may not be relied upon by any other party without the prior written consent of the Director of the WiCell Cytogenetics Laboratory. The results of this assay are for research use only. If the results of this assay are to be used for any other purpose, contact the Director of the WiCell Cytogenetics Laboratory.

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HISTOLOGY - IHC - MOLECULAR - IMAGING

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

Sample Report: 13507-STR Sample Name on Tube: 13507-STR 63.5 ng/μL, (A260/280=1.92) 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: 04/16/18 Assay Date: 04/19/18 File Name: STR 180420 wmr Report Date: 04/27/18

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 information has					
TPOX	6-13	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 WiCell's Technical 					
D16S539	5, 8-15	Support.					
D7S820	07S820 6-14						
D13S317	7-15						
D5S818	7-16						
Penta E	5-24						
D18S51	8-10, 10.2, 11-13, 13.2, 14-27						
D21S11	21S11 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 13507-STR cells submitted by WiCell QA dated and received on 04/16/18, this sample (Label on Tube: 13507-STR) defines the STR profile of the human stem cell line UCSD115i-70-1 comprising 28 allelic polymorphisms across the 15 STR loci analyzed.

<u>Interpretation:</u> No STR polymorphisms other than those corresponding to the human UCSD115i-70-1 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 13507-STR sample submitted corresponds to the UCSD115i-70-1 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 04/30/18	X WMR Digitally Signed on 04/30/18
, BA	, PhD, Director / Co-Director
TRIP Laboratory Molecular	UWHC Molecular Diagnostics Laboratory / UWSMPH TRIP Laborate

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 #: 180						
WiCell		DATE RECEIVED: 06-Fe						
504 S. Rosa Rd., Rm 101	L	TEST INITIATED: 07-Fe						
Madison, WI 53719		TEST COMPLETED: 21-Feb						
Madisuli, wr35713 CREMO15i-SS16-1 WB66723 13311, CREMO16i-SS18-1 WB66712 13312, CREMO19i-SS25-1 WB66728 13313, CREMO21i-SS29-1 WB66729 13314, SOX2-GFP WB66727 13315, WC005i-FX11-7 WB20338 13316, WC009i-F WB17924 13317, PENN015i-668-5 DB36410 13318, PENN029i-752-3 DI 13319, PENN009i-57-52 DB35131 13320, PENN034i-322-1 DB34729 13 PENN077i-521-1 DB36597 13322, PENN125i-233-4 DB35073 13323, PE 262-1 DB35081 13324, UCSD048i-52-1 WB66722 13325, UCSD208i-111 WB66730 13326, UCSD133i-79-1 WB61228 13327, UCSD152i-11-3 WB6 13328, UCSD168i-22-1 WB61577 13329, UCSD170i-22-3 WB60774 1333 UCSD175i-18-3 WB60837 13331, UCSD066i-67-1 WB60392 13332, UCSD 13338, UCSD151i-11-2 WB59218 13339, UCSD158i-12-4 WB6020 1334 UCSD088i-6-5 WB53942 13341, UCSD147i-10-2 WB54174 13342, UCSD 13338, UCSD151i-11-2 WB59218 13339, UCSD158i-12-4 WB6020 1334 UCSD088i-6-5 WB53942 13344, UCSD147i-10-2 WB54174 13342, UCSD 13345, UCSD100i-36-1 WB55460 13346, UCSD129i-75-1 WB54795 1334 UCSD136i-82-1 WB54902 13348, UCSD139i-85-1 WB55345 13349, UCSD 18-1 WB54899 13350, UCSD187i-104-1 WB55339 13351, UCSD206i-31- WB54794 13352, UCSD217i-115-1 WB55077 13355, UCSD028i-116-1 W 13354, UCSD094i-25-1 WB55177 13355, UCSD095i-25-2 WB5780 1335 UCSD097i-34-2 WB57100 13357, UCSD113i-68-1 WB57056 13358, UCSD 70-1 WB55081 13359, UCSD184i-8-1 WB55338 13360, UCSD188i-105-1 WB55082 13361				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 VALIDATION / PD #:		000053						
TEST METHODOLOGY:		USP - Direct Transfer						
	~	Jon Dirottinali						

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 April 09, 2018 FORM SOP-QU-004.01 Version G Edition 02 Reported by: AP Reviewed by: DF BD Monolight 180

		Reading A A		Α	Read	ing B	В	Ratio		
#	Sample Name	RLU1	RLU2	Ave	RLU1	RLU2	Ave	B/A	Result	Comments/Suggestions
1	UCSD115i-70-1-WB55081 13507	287	303	295	107	104	105.5	0.36	Negative	
2	Positive (+) Control	602	603	602.5	26317	26406	26362	43.75	Positive	
3	Negative (-) Control	873	884	878.5	93	93	93	0.11	Negative	

