

Thaw and Culture Details

Cell Line Name	UCSD092i-1-10						
WiCell Lot Number	WB63301						
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.						
	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-April-2017						
Vial Label	UCSD092i-1-10 p18 WB63301						
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	Pass					
Post-Thaw Viable Cell Recovery	Post-Thaw Viable Cell		≥ 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 (MEGA^{EX})

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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.



Approval Date	Quality Assurance Approval				
23-May-2017	9/25/2027 <u>RK</u> Quality Assurance Signed by: Veremer, Frik				

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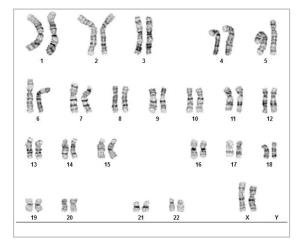


Cell Line Gender: Female

Investigator:

Reason for Testing: lot release testing

Date Reported: Thursday, September 07, 2017 Cell Line: UCSD092i-1-10-WB63301 12774 Passage#: 18 Date of Sample: 8/24/2017 Specimen: Human IPS Results: 46,XX



Cell: 32 Slide: G01 Slide Type: Karyotype

Total Counted: 20 Total Analyzed: 9 Total Karyogrammed: 5 Band Resolution: 450 - 525

Interpretation:

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

 Completed by:
 Reviewed and Interpreted by:

 A signed copy of this report is available upon request.

 Date:
 Sent By:
 Sent To:

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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Short Tandem Repeat Analysis

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

Sample Report: 12774-STR Sample Name on Tube: 12774-STR 82.7 ng/μL, (A260/280=1.99) Sample Type: Cells Cell Count: ~2 million cells **Requestor:** WiCell Research Institute Quality Department WiCell[®] info@wicell.org (888) 204-1782

Sample Date: N/A Receive Date: 09/05/17 Assay Date: 09/12/17 File Name: 170913 STR WMR Report Date: 09/15/17

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
D16S539	5, 8-15	WiCell's Technical Support.
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 12774-STR cells submitted by WiCell QA dated and received on 09/05/17, this sample (Label on Tube: 12774-STR) defines the STR profile of the human stem cell line UCSD092i-1-10 comprising 28 allelic polymorphisms across the 15 STR loci analyzed.

<u>Interpretation:</u> No STR polymorphisms other than those corresponding to the human UCSD092i-1-10 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 12774-STR sample submitted corresponds to the UCSD092i-1-10 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 09/15/17	X WMR	Digitally Signed on	09/15/17
		, PhD, Director / Co-Direc	tor

TRIP Laboratory, Molecular

UWHC Molecular Diagnostics Laboratory / UWSMPH TRIP Laboratory

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 #:	17081954
WiCell	DATE RECEIVED:	31-Aug-17
504 S Rosa Rd, Rm 101	TEST INITIATED:	06-Sep-17
Madison, WI 53719	TEST COMPLETED:	20-Sep-17
SAMPLE NAME / DESCRIPTION:	WC027i-5807-5-WB66542 12785	
	WC028i-5807-6-WB66555 12786	
	WC029i-5907-1-WB66543 12787	
	WC030i-5907-2-WB66544 12788	
	WC031i-5907-6-WB66556 12789	
	UCSD082i-40-1-WB60394 12790	
	UCSD092i-1-10-WB63301 12791	
	UCSD093i-1-11-WB64617 12792	
	MCW109i-40001470-WB66547 12793	
	MCW064i-40001159-WB66546 12794	
UNIQUE IDENTIFIER:	NA	
PRODUCT REGISTRATION:	Human iPS cells	

PRODUCT REGISTRATION:

TEST RESULTS:	# Tested	# Positives (Growth)	- Control	
	10	0	2 Negatives	

TEST SUMMARY:

# Samples	Media Type	Volume (mL)	Incubation Temperature (° C)	Incubation Duration (Days)	
10	TSB	40	20 - 25	14	
10	FTG	40	30 - 35	14	

REFERENCE:

METHOD VALIDATION / PD #: **TEST METHODOLOGY:**

Processed according to LAB-003: Sterility Test Procedure 000053 **USP** - Direct Transfer

COMMENTS: NA **REVIEWED BY**

DATE 21SEPIT

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 28, 2017 FORM SOP-QU-004.01 Version F Edition 02 Reported by: KR Reviewed by: JB Berthold Flash n' Glo 539

		Read	ing A	Α	Read	ing B	В	Ratio		
#	Sample Name	RLU1	RLU2	Ave	RLU1	RLU2	Ave	B/A	Result	Comments/Suggestions
1	UCSD092i-1-10-WB63301 12774	85	88	86.5	26	25	25.5	0.29	Negative	
2	Positive (+) Control	165	166	165.5	17611	17643	17627	106.51	Positive	
3	Negative (-) Control	257	263	260	36	30	33	0.13	Negative	

