

Thaw and Culture Details

Cell Line Name	JHU094i			
WiCell Lot Number	DB41258			
Provider	Johns Hopkins University – Laboratory of Dr. Lewis Becker			
Banked By	Johns Hopkins University – Laboratory of Dr. Lewis Becker			
Thaw and Culture Recommendations	WiCell recommends thawing 1 vial into 5 wells of a 6 well plate. WiCell recommends thawing using ROCK Inhibitor for best results.			
Culture Platform	Feeder Independent			
	Medium: E8			
	Matrix: Vitronectin			
Protocol	WiCell Feeder Independent E8 Medium Protocol			
Passage Number	p4 These cells were cultured for 4 passages post reprogramming prior to freeze. Add +1 to the passage number to best represent the overall passage number of the cells at thaw.			
Date Vialed	23-May-2016			
Vial Label	P94 P4 1.6X10^6 5/23/16			
Biosafety and Use Information	This cell line is of human origin. 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
	WiCell	SOP-CH-003	Expected karyotype	See Report
Karyotype by G-banding	Results: 46,XY,del(18)(q21.3)[3]/46,XY[17] Interpretation: This is an abnormal karyotype. An interstitial deletion in the long (q) arm of chromosome 18 is present in three of twenty cells examined. Loss of chromosome 18 is recurrently acquired in pluripotent stem cell cultures. No other clonal abnormalities were detected at the stated band level of resolution.			
Post-Thaw Viable Cell Recovery	WiCell	SOP-CH-305	Recoverable attachment after passage	Pass
Identity by STR	UW Translational	PowerPlex 16 HS		
	Research Initiatives in	System by	Defines profile	Pass
	Pathology Laboratory	Promega		
Sterility	Steris	ST/07	Negative	Pass
Mycoplasma	WiCell	SOP-CH-044	Negative	Pass

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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.



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.

- Embryoid bodies
- Infinium[®] Expanded Multi-Ethnic Genotyping Array (MEGA^{EX})

Approval Date	Quality Assurance Approval
26-August-2016	7/18/2019 XIG Quality Assurance Signed by: Gay, Jenna

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 Date Reported: Tuesday, July 2, 2019
 Cell Line Sex: Male

 Cell Line: JHU094i-DB41258 14822
 Reason for Testing: lot release testing

 Passage#: 5
 Investigator: , WiCell

 Specimen: Human IPS
 Investigator: , WiCell

 Results: 46,XY,del(18)(q21.3)[3]/46,XY[17]
 Cell: 47

 Slide: G01
 Slide: G01

 Slide Type: Karyotype
 Slide Type: Karyotype

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Total Counted: 20 Total Analyzed: 10 Total Karyogrammed: 5 Band Resolution: 400 - 500

Interpretation:

This is an abnormal karyotype. An interstitial deletion in the long (q) arm of chromosome 18 is present in three of twenty cells examined. Loss of chromosome 18 is recurrently acquired in pluripotent stem cell cultures. No other clonal abnormalities were detected at the stated band level of resolution.

Completed by:			
Reviewed and Interpreted by:		, PhD, FACMG	
Date:	Sent By:	Sent To:	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.

TRIPath

HISTOLOGY - IHC - MOLECULAR - IMAGING

Department of Pathology and Laboratory Medicine TRIP Laboratory (Molecular) https://research.pathology.wisc.edu/trip-home/ (608) 265-9168

Sample Report:

14822-STR Sample Name on Tube: 14822-STR 20.7 ng/μL, (A260/280=3.31) Sample Type: Cells Cell Count: ~2 million cells

Short Tandem Repeat Analysis



characterization@wicell.org (608) 316-4145

Receive Date: 07/01/19 Report Sent: 07/06/19 Assay Date: 07/01/19 File Name: STR 190702 wmr Report Date: 07/05/19

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	Х,Ү	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	
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 14822-STR cells submitted by WiCell QA dated and received on 07/01/19, this sample (Label on Tube: 14822-STR) defines the STR profile of the human cell line JHU094i comprising 27 allelic polymorphisms across the 15 STR loci analyzed.

<u>Interpretation:</u> No STR polymorphisms other than those corresponding to the human JHU094i 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 14822-STR sample submitted corresponds to the JHU094i cell line and was not contaminated with any other human 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 cell lines is ~2-5%.

X RMB Digitally Signed on 07/05/19	X WMR Digitally Signed on 07/05/19
BA	, PhD, Director / Co-Director
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: https://research.pathology.wisc.edu/acknowledging-trip/ 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 https://www.wicell.org/media.acux/ca76d97c-862a-43f3-b02a-ab2d1e619100. 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.

Requestor: WiCell Research Institute Quality Assurance Department

Native Product Sterility Report



WiCell 504 S Rosa Road, Rm 101 Madison, WI 53719		SAMPLE #:1906180DATE RECEIVED:20-Jun-1TEST INITIATED:25-Jun-2TEST COMPLETED:09-Jul-1	19 19
SAMPLE NAME / DESCRIPTION:		DB44252 14847	
	NA		

UNIQUE IDENTIFIER:

NA

TEST RESULTS:	# Tested	# Positives (Growth)	- Control	
	19	0	2 Negative	
TEST SUMMARY:				· · · · · · · · · · · · · · · · · · ·

TEST SUMMARY:	# Samples	Media Type	Volume (mL)	Incubation Temperature (° C)	Incubation Duration (Days)
	19	TSB	40	20-25	14
	19	FTG	40	30-35	14
REFERENCE:		Processed accord	ding to LAB-003: St	terility Test Procedu	Ire
PD #:		000053			
TEST METHODOLOG	θY:	USP - Direct Trar	nsfer		





COMMENTS: Sample #19061805

Reported as per packing slip.

REVIEWED BY

DATE 10 TUL 19

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. Results applied to samples as received.

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Mycoplasma Assay Report

PCR-based assay performed by WiCell Lot Release Testing 28Jun19

#	Sample Name	Result	Comments/Suggestions
1	JHU094i-DB41258 14822	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma
2	Positive (+) Control	Positive	
3	Negative (-) Control	Negative	

Reported by: Gustavo Velazquez, Research Specialist- Cytogenetics Reviewed by: Katie Remondini, Cell Culture Specialist

Date:_____ Sent By:____ Sent To__

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A gel image is available upon request.