

Thaw and Culture Details

Cell Line Name	JHU002i-1						
WiCell Lot Number	DB40935						
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	p7 These cells were cultured for 7 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	16-February-2016						
Vial Label	P002-M9 P7 VNT+E8.1M 2/16/16						
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.						

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	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.

- Embryoid bodies
- Infinium® Expanded Multi-Ethnic Genotyping Array (MEGAEX)

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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			
26-August-2016	2/14/2019 XG Quality Assurance Signed by <i>Gay</i> , Jenna			

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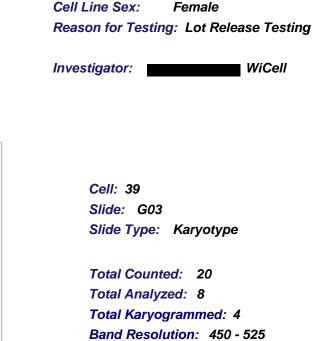
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Date Reported: Tuesday, January 22, 2019 Cell Line: JHU002i-1-DB40935 14247 Passage#: 8 Date of Sample: 1/15/2019 Specimen: Human IPS Results: 46,XX

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Interpretation:

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

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		CG(ASCP) 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.

Short Tandem Repeat Analysis

HISTOLOGY - IHC - MOLECULAR - IMAGING

TRIPath

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

Sample Report:

14247-STR Sample Name on Tube: 14247-STR 64.1 ng/ μ L, (A260/280=1.97) Sample Type: Cells Cell Count: ~2 million cells

Requestor: WiCell Research Institute **Quality Assurance Department**



characterization@wicell.org (608) 316-4145

Receive Date: 02/04/19 **Report Sent: 02/08/19** Assay Date: 02/06/19 File Name: STR 190206 wmr **Report Date: 02/08/19**

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
ТРОХ	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	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	

Results: Based on the 14247-STR cells submitted by WiCell QA dated and received on 02/04/19, this sample (Label on Tube: 14247-STR) defines the STR profile of the human stem cell line JHU002i-1 comprising 28 allelic polymorphisms across the 15 STR loci analyzed.

Interpretation: No STR polymorphisms other than those corresponding to the human JHU002i-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 14247-STR sample submitted corresponds to the JHU002i-1 stem cell line and was not contaminated with any other human stem cells or a significant amount of mouse feeder layer cells.

Sensitivity: 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 02/08/19	X WMR Digitally Signed on 02/08/19
, 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: http://www.pathology.wisc.edu/research/trip/acknowledging 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.

Native Product Sterility Report



WiCell 504 S Rosa Rd, Rm 101 Madison, WI 53719		SAMPLE #: DATE RECEIVED: TEST INITIATED: TEST COMPLETED:	17110775 09-Nov-17 14-Nov-17 28-Nov-17
SAMPLE NAME / DESCRIPTION:	JHU019i-DB40960 13048 JHU050i-DB41074 13049 JHU199i-DB36795 13050 JHU206i-DB36823 13051 UCSD112i-2-11-WB66654 13052 UCSD177i-17-2-DB25459 13053 UCSD125i-7-2-DB25462 13054 UCSD174i-18-2-DB25465 13055 JHU002i-1-DB40935 13056 JHU004i-2-DB40945 13057		
UNIQUE IDENTIFIER: PRODUCT REGISTRATION:	NA Human iPS cells		

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: Processed according to LAB-003: Sterility Test Procedure									
METHOD VALIDATION / PD #: 000053									
TEST METHODOLO	GY:	USP - Direct Tran	sfer						
COMMENTS:	NA								
REVIEWED BY	Deno	>d	0.000	DATE	OIDEC17				

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 January 17, 2019 FORM SOP-QU-004.01 Version G Edition 02 Reported by: AP Reviewed by: JB Berthold Flash n' Glow 539

		Read	ing A	Α	Read	ling B	В	Ratio		
#	Sample Name	RLU1	RLU2	Ave	RLU1	RLU2	Ave	B/A	Result	Comments/Suggestions
1	JHU002i-1-DB40935 14247	123	116	119.5	42	41	41.5	0.35	Negative	
2	Positive (+) Control	73	82	77.5	615	624	619.5	7.99	Positive	
3	Negative (-) Control	267	265	266	30	27	28.5	0.11	Negative	

