

Thaw and Culture Details

Cell Line Name	JHU167i						
WiCell Lot Number	DB41380						
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 3 wells of a 6 well plate. WiCell recommends passaging with ROCK Inhibitor.						
Culture Platform	Feeder Independent						
	Medium: E8						
	Matrix: Vitronectin						
Protocol	WiCell Feeder Independent E8 Medium Protocol						
Passage Number	p8 These cells were cultured for 8 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	08-June-2016						
Vial Label	P167 P8 2.5X10^6 6/8/16						
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
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 (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-August-2016	648/2018 XG Quality Assurance Signed by: Gay, Janna		

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Date Reported: Friday, May 25, 2018 Cell Line: JHU167i-DB41380 13736 Passage#: 9 Date of Sample: 5/18/2018 Specimen: Human IPS Results: 46,XY Cell Line Sex: Male Reason for Testing: Lot Release Testing Investigator: , WiCell Cell: 6 Slide: G03 Slide Type: Karyotype

> Total Counted: 20 Total Analyzed: 8 Total Karyogrammed: 4 Band Resolution: 450 - 475

Interpretation:

82

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

There is a pericentric inversion of chromosome 9 in all cells examined. This inversion has been reported as a normal population variant.

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

8

A signed copy of this report is available upon request.

22

	Date:	Sent By:	Sent To:	QC Review By:
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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: 13736-STR Sample Name on Tube: 13736-STR 38.5 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: 05/21/18 Assay Date: 05/29/18 File Name: STR 180530c wmr Report Date: 06/04/18

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	vWA 10-22						
vWA							
Amelogenin							
Penta D	2.2, 3.2, 5, 7-17	more information is required,					
CSF1PO	D16S539 5, 8-15 D7S820 6-14						
D16S539							
D7S820							
D13S317	7-15						
D5S818	7-16						
Penta E	5-24						
D18S51	8-10, 10.2, 11-13, 13.2, 14-27						
D21S11	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	TH01 4-9,9.3,10-11,13.3						
D3S1358	12-20						

<u>Results:</u> Based on the 13736-STR cells submitted by WiCell QA dated and received on 05/21/18, this sample (Label on Tube: 13736-STR) defines the STR profile of the human stem cell line JHU167i comprising 27 allelic polymorphisms across the 15 STR loci analyzed.

<u>Interpretation</u>: No STR polymorphisms other than those corresponding to the human JHU167i 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 13736-STR sample submitted corresponds to the JHU167i 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 06/05/18	X WMR Digitally Signed on 06/05/18
, 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 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 #:	18050738
WiCell	DATE RECEIVED:	10-May-18
504 S Rosa Rd, Rm 101	TEST INITIATED:	14-May-18
Madison, WI 53719	TEST COMPLETED:	29-May-18
SAMPLE NAME / DESCRIPTION:	UCSD165i-97-1 WB66795 13679 UCSD224i-NDC1-2 WB66797 13680 UCSD224i-NDC1-2 WB66798 13681 UWWC1-DS4 WB66799 13682 WC035i-SOD1-D90D WB66757 13683 JHU018i DB40957 13684 JHU032i DB36206 13685 JHU083i DB41146 13686 JHU126i DB36258 13687 JHU126i DB36258 13687 JHU190i DB36770 13689 JHU190i DB36770 13689 JHU240i DB41420 13690 JHU054i DB41080 13691 JHU240i DB41149 13693 JHU084i DB41149 13693 JHU224i DB36895 13694 JHU224i DB36895 13694 JHU221i DB36885 13696 JHU218i DB36874 13697 JHU217i DB36868 13698 NA	29-May-18
PRODUCT REGISTRATION:	Other: Human iPS cells	
Hebeet Rediotriktion.	Other. Human IPS tells	

TEST RESULTS: # Teste		# Positives (Growth)	- Control	
	20	0	3 Negatives	

TEST SUMMARY:

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

Native Product Sterility Report



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

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

COMMENTS:

Sample #18050738

REVIEWED BY



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 May 09, 2018 FORM SOP-QU-004.01 Version G Edition 02 Reported by: KR Reviewed by: DF 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	JHU167i-DB41380 13704	217	224	220.5	73	75	74	0.34	Negative	
2	Positive (+) Control	425	420	422.5	12941	13094	13018	30.81	Positive	
3	Negative (-) Control	583	596	589.5	60	56	58	0.10	Negative	

