

Thaw and Culture Details

Cell Line Name	JHU234i		
WiCell Lot Number	DB37041		
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 1 well of a 6 well plate using TeSR [™] -E8 [™] and Recombinant Human Vitronectin. WiCell recommends passaging with ROCK Inhibitor		
Protocol	WiCell Feeder Independent Pluripotent Stem Cell Protocol		
Culture Platform Prior to Freeze	Feeder Independent		
	Medium: E8		
	Matrix: Recombinant Human Vitronectin		
Passage Number	p5 These cells were cultured for 5 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	09-June-2015		
Vial Label	P234 P5 1.5x10^6 6/9/15		
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-49	Expected karyotype	See Report
Karyotype by G-banding	Results: 46,XY,inv(20)(p11.2q13.1)[7]/46,XY[13] <i>Interpretation:</i> This is an abnormal karyotype. A pericentric inversion of chromosome 20 is present in seven of twenty cells examined. No other clonal abnormalities were detected at the stated band level of resolution.			
Post-Thaw Viable Cell Recovery	WiCell	SOP-99	Recoverable attachment after passage	Pass
Identity by STR	WiCell	PowerPlex 16 HS System by Promega	Defines STR profile of deposited cell line	Pass
Sterility	Steris	ST/07	Negative	Pass
Mycoplasma	WiCell	SOP-79	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.

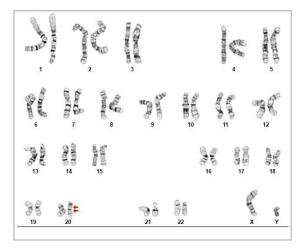
- Embryoid bodies
- Infinium[®] Expanded Multi-Ethnic Genotyping Array (MEGA^{EX})

Approval Date	Quality Assurance Approval		
14-July-2016	12/17/2020 XG Quality Assurance Signed by Gay, Jenna		

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Date Reported: Tuesday, December 8, 2020Cell Line Sex: MaleCell Line: JHU234i-DB37041Reason for Testing: LOT_RELEASESubmitted Passage #: 7Investigator: WiCell Stem Cell Bank, WiCellDate of Sample: 12/2/2020Investigator: WiCell Stem Cell Bank, WiCellSpecimen: Human IPSCResults: 46,XY,inv(20)(p11.2q13.1)[7]/46,XY[13]



Cell: 3 Slide: G01 Slide Type: Karyotype Total Counted: 20 Total Analyzed: 9 Total Karyogrammed: 4 Band Resolution: 475 - 525

Interpretation:

This is an abnormal karyotype. A pericentric inversion of chromosome 20 is present in seven of twenty cells examined. No other clonal abnormalities were detected at the stated band level of resolution.

Completed by:	CG(ASCP)			
Reviewed and Interpreted by:		Ph.D.		
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

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Short Tandem Repeat

Requestor: WiCell Stem Cell Bank, WiCell Samples Received: 23Nov20, 25Nov20 STR Amplification Date: 30Nov20

Form SOP-89.01 Version 3.0

Sample Name	<mark>JHU234i-</mark> DB37041 p.7	JHU004i-2- DB40945 p.8		
Label on tube	83961	84011		
FGA				
TPOX				
D8S1179	Identifying information has			
vWA	been reda			
Amelogenin	protect do			
Penta_D	confidentiality. If more information			
CSF1PO	is require			
D16S539	please contact info@wicell.org			
D7\$820				
D13\$317				
D5\$818				
Penta_E				
D18\$51				
D21S11				
TH01				
D3S1358				
Allelic Polymorphisms	24	26		
Matches*				
Comments				

*Note: The STR profile of the following sample is an exact match for the given sample/samples.



Short Tandem Repeat

Requestor: WiCell Stem Cell Bank, WiCell Samples Received: 23Nov20, 25Nov20 STR Amplification Date: 30Nov20 Form SOP-89.01 Version 3.0

Results: The genotypic profiles comprise a range of 24-26 allelic polymorphisms across the 15 STR loci analyzed.

Interpretation: 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. These results suggests that the cells submitted correspond to the cell lines as named and were not contaminated with any other human 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 cell lines is ~2-5%.



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Raw data is available upon request.

Native Product Sterility Report



WiCell				SAMPLE #:	20110772
-		DATE RECEIVED:			12-Nov-20
504 S Rosa Road, Rm 10)1			TEST INITIATED:	17-Nov-20
Madison, WI 53719			TE	EST COMPLETED:	01-Dec-20
SAMPLE NAME / DE	SCRIPTION:	PENN022i-89-1-WB67590			
		WA09-RB67589			
		JHU036i-D840981			
		JHU105i-DB36241 JHU148i-DB36280			
		JHU173i-DB36380			
		JHU214i-DB36851			
		JHU234i-DB37041			
		STAN207i-459C2-W	VB67594		
		JHU085i-DB36225			
UNIQUE IDENTIFIEF	1:	N/A			
TEST RESULTS:		# Positives			
	# Tested	(Growth)	- Control		
	10	0	2 Negatives		
			L Hegatives		
TEST SUMMARY:				Incubation	Incubation
	# Complex	Mastle Tours		Temperature	Duration
	# Samples	Media Type	Volume (mL)	(°C)	(Days)
	10	TSB	40	20-25	14
	10	FTC		20.05	
	10	FTG	40	30-35	14
REFERENCE:		Processed accord	ting to LAB-003: S	terility Test Procedu	re
PD #:		000053			
TEST METHODOLOG	GY:	USP - Direct Tran	sfer		
COMMENTS:	NA				
		Digitally signed by Sarah			
	Such Su	Scrivner Date: 2020.12.03 07:19:34			
REVIEWED BY		-06'00'		_ DATE_	
Specific test results may	not be indicative of the	e characteristics of any othe	r samples from the same	lot or similar lots. This test	report shall not be
reproduced, except i	n tull, without prior writt	en approval. Liability is limit	led to the costs of the test	s.Results applied to sample	es as received.
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Mycoplasma Assay Report

PCR-based assay performed by WiCell WiCell 04Nov20

Sample Name	Result	Comments/Suggestions
INC149 02Nov20AP (83598)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
INC123 02Nov29KR 1 of 2 (83599)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
INC123 02Nov20KR 2 of 2 (83600)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
INC169 02Nov20MMM 1 of 2 (83601)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
INC169 02Nov20MMM 2 of 2 (83602)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
JHU105i-DB36241 (83622)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
JHU004i-2-DB40945 (83623)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
JHU036i-DB40981 (83624)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
JHU102i-DB41279 (83625)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
JHU148i-DB36280 (83626)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
JHU173i-DB36380 (83627)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
JHU214i-DB36851 (83628)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
JHU234i-DB37041 (83629)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
JHU250i-DB36904 (83630)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
Positive (+) Control	Positive	
Negative (-) Control	Negative	

Reported by:Senior Cell Culture SpecialistReviewed by:Assistant Cell Culture Specialist

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A gel image is available upon request.