

Thaw and Culture Details

Cell Line Name	LUEL8363i-2						
WiCell Lot Number	WB66912						
Provider	Luebeck University, Dr. Christine Klein						
Banked By	WiCell						
Thaw and Culture Recommendations	WiCell recommends thawing 1 vial into 3 wells of a 6 well plate.						
Culture Platform	Feeder Independent						
	Medium: mTeSR™1						
	Matrix: Matrigel®						
Protocol	WiCell Feeder Independent mTeSR [™] 1 Protocol						
Passage Number	p17 These cells were cultured for 16 passages prior to freeze and post colony picking. WiCell adds +1 to the passage number at freeze to best represent what the overall passage number of the cells at thaw. Plated cells at thaw should be labeled passage 17.						
Date Vialed	09-September-2018						
Vial Label	LUEL8363i-2 p17 WB66912						
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 Provider Test Method		Result
Karyotype by G-banding	WiCell	SOP-CH-003	Expected karyotype	See Report
Post-Thaw Viable Cell Recovery	WiCell	SOP-CH-305 ≥ 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 Defines profile Promega		Pass
Sterility	Steris	ST/07	Negative	Pass
Mycoplasma	WiCell	SOP-QU-004	Negative	Pass

Testing Reported by Provider The provider has provided the following testing and results for this cell line. If available, a link to the relevant publication is provided on the cell line specific web page on the WiCell website.

Test Description	Result	Report
HIV, HBV, and HCV Screening	Negative	Report not available

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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.



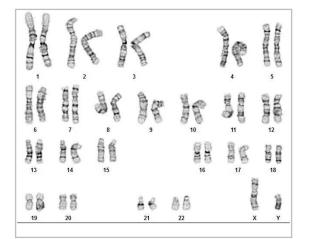
Approval Date	Quality Assurance Approval			
08-November-2018	11/8/2018 XG Quality Assurance Signed by Gay, Jenna			

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Date Reported: Monday, October 22, 2018 Cell Line: LUEL8363i-2-WB66912 14022 Passage#: 17 Date of Sample: 10/16/2018 Specimen: Human IPS Results: 46,XY



Cell Line Sex: Male
Reason for Testing: lot release testing
Investigator: , WiCell
Cell: 27
Slide: G02
Slide Type: Karyotype
Total Counted: 20
Total Analyzed: 8

Total Analyzed: 8 Total Karyogrammed: 4 Band Resolution: 450 - 550

Interpretation:

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

Completed by: Reviewed and Interpreted by:	Ph	D, 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.



HISTOLOGY - IHC - MOLECULAR - IMAGING

Department of Pathology and Laboratory Medicine TRIP Laboratory (Molecular) (608) 265-9168

Sample Report: 14022-STR Sample Name on Tube: 14022-STR 81.7 ng/µL, (A260/280=1.91) Sample Type: Cells Cell Count: ~2 million cells **Requestor:** WiCell Research Institute Quality Department

Short Tandem Repeat

Analysis

Sample Date: N/A Receive Date: 10/22/18 Assay Date: 10/23/18

Assay Date: 10/23/18 **File Name:** STR 181024 wmr **Report Date:** 10/26/18

STR Locus	STR Genotype Repeat #	STR Genotype					
FGA	GA 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						
TPOX	6-13	information has 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						
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 14022-STR cells submitted by WiCell QA dated and received on 10/22/18, this sample (Label on Tube: 14022-STR) defines the STR profile of the human stem cell line LUEL8363i-2 comprising 27 allelic polymorphisms across the 15 STR loci analyzed.

<u>Interpretation:</u> No STR polymorphisms other than those corresponding to the human LUEL8363i-2 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 14022-STR sample submitted corresponds to the LUEL8363i-2 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 10/26/18	X WMR	Digitally Signed on	10/26/18
, BA TRIP Laboratory Molecular	UWHC Molecul	, PhD, Director / Co-Dire	

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 #:	18091843
WiCell		DATE RECEIVED:	27-Sep-18
504 S Rosa Rd, Rm 101		TEST INITIATED:	03-Oct-18
Madison, WI 53719	٦	TEST COMPLETED:	17-Oct-18
SAMPLE NAME / DESCRIPTION:	JHU018i, WB66902 14027		
	UCSD182i-3-2, WB66903 14028		
	LUEL8361i-1, WB66906 14029		
	LUEL8312i-1, WB66907 14030		
	LUEL8363i-2, WB66912 14031		
	LUEL7159i-7,WB66914 14032		
	UCSD231i-SAD1-3, WB66915 14033		
	LUEL7994i-1, WB66916 14034		
	LUEL8357i-2, WB66917 14035		
	LUEL7153i-2, WB66918 14036		
UNIQUE IDENTIFIER:	NA		
PRODUCT REGISTRATION:	Other: Human iPS cells		

TEST RESULTS:		# Positives	
	# Tested	(Growth)	- Control
	10	1	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:

Sample labeled as LUEL7159i-7 was positive in both TSB and FTG.

REVIEWED BY

DATE 2200718

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.

STERIS Laboratories, Inc. 9303 West Broadway Ave Brooklyn Park, MN 55445

LAB-003 rev 31 Form 5 Effective: 2018-02-28 Page 1 of 1



Mycoplasma Detection Assay Report Testing Performed by WiCell

Testing Performed by WiCell Lot Release Testing October 18, 2018 FORM SOP-QU-004.01 Version G Edition 02 Reported by: AP Reviewed by: JB BD Monolight 180

		Read	ing A	Α	Read	ing B	В	Ratio		
#	Sample Name	RLU1	RLU2	Ave	RLU1	75	Ave	B/A	Result	Comments/Suggestions
1	LUEL8363i-2-WB66912 14022	274	271	272.5	115	112	113.5	0.42	Negative	
2	Positive (+) Control	193	190	191.5	5519	5687	5603	29.26	Positive	
3	Negative (-) Control	641	642	641.5	79	73	76	0.12	Negative	

