

Thaw and Culture Details

Cell Line Name	LUEL7996i-2
WiCell Lot Number	WB66935
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	p8 These cells were cultured for 7 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 8.
Date Vialed	21-October-2018
Vial Label	LUEL7996i-2 p8 WB66935
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 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	≥ 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.

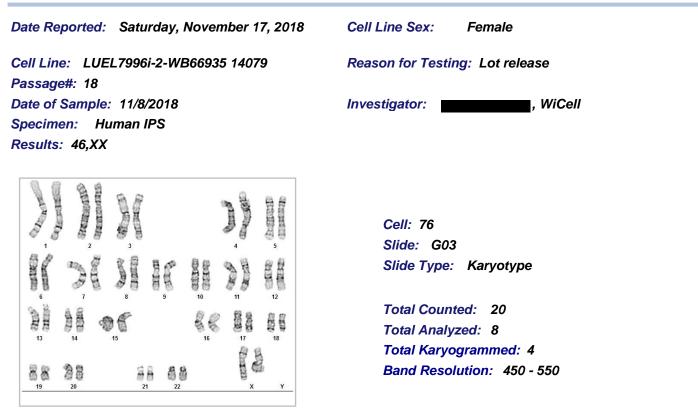


Approval Date	Quality Assurance Approval
04-January-2019	1/4/2019 XG Quality Assurance Signed by Gay, Jenna

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Interpretation:

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

Date:	Sent By:	Sent To:	QC Review By:
Reviewed and Interpreted by:	ŀ	PhD, FACMG	
Completed by:	,	CG(ASCP)	

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 TRIPath Analysis

HISTOLOGY - IHC - MOLECULAR - IMAGING

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

Sample Report:

14141-STR Sample Name on Tube: 14141-STR 113.1 ng/µL, (A260/280=1.85) Sample Type: Cells Cell Count: ~2 million cells

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



characterization@wicell.org (608) 316-4145

Receive Date: 12/17/18 **Report Sent:** 12/21/18 Assav Date: 12/18/18 File Name: STR 181218 wmr **Report Date: 12/21/18**

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	
TPOX	6-13	Identifying
D8S1179	7-18	information has been redacted to
vWA	10-22	protect donor
Amelogenin	X,Y	confidentiality. If
Penta_D	2.2, 3.2, 5, 7-17	more information
CSF1PO	6-15	is required,
D16S539	5, 8-15	please, contact
D7S820	6-14	WiCell's Technical
D13S317	7-15	Support.
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 14141-STR cells submitted by WiCell QA dated and received on 12/17/18, this sample (Label on Tube: 14141-STR) defines the STR profile of the human stem cell line LUEL7996i-2 comprising 26 allelic polymorphisms across the 15 STR loci analyzed.

Interpretation: No STR polymorphisms other than those corresponding to the human LUEL7996i-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 14141-STR sample submitted corresponds to the LUEL7996i-2 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 12/21/18	X WMR Digitally Signed on 12/21/18
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 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 #:	18102104
DATE RECEIVED:	25-Oct-18
TEST INITIATED:	02-Nov-18
TEST COMPLETED:	16-Nov-18

SAMPLE NAME / DESCRIPTION: STAN140i-243C1 D838122 14061 STAN204i-448C1 D844534 14062 LUEL8318i-2 WB66927 14063 LUEL7149i-2 WB66926 14064 LUEL8364i-5 WB66933 14065 STAN096i-102C6 D844680 14066 STAN095i-102C4 D844677 14067 STAN205i-448C2 D844537 14068 LUEL7996i-2 WB66935 14069 WC007i-FX13-2 WB66934 14070 UNIQUE IDENTIFIER: NA

Other: Human iPS cells

PRODUCT REGISTRATION:

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

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

COMMENTS:

REVIEWED BY

NA

DATE 16 NOVIS

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

PRINTED ON 11/16/2018

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 November 08, 2018 FORM SOP-QU-004.01 Version G Edition 02 Reported by: AP Reviewed by: JB 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	LUEL7996i-2-WB66935 14079	187	186	186.5	74	76	75	0.40	Negative	
2	Positive (+) Control	373	375	374	43003	43090	43047	115.10	Positive	
3	Negative (-) Control	687	701	694	97	83	90	0.13	Negative	

