

Thaw and Culture Details

Cell Line Name	MCW070i-40002330		
WiCell Lot Number	WB67159		
Provider	Medical College of Wisconsin – Laboratory of Dr. Ulrich Broeckel		
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: TeSR [™] -E8 [™]		
	Matrix: Matrigel®		
Protocol	WiCell Feeder Independent E8 Medium Protocol		
Passage Number	p16 These cells were cultured for 15 passages prior to freeze and post colony selection. WiCell adds +1 to the passage number at freeze to best represent the overall passage number of the cells at thaw. Plated cells at thaw should be labeled passage 16.		
Date Vialed	15-April-2019		
Vial Label	MCW070i-40002330 p16 WB67159		
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 prior to passage, ≤ 30% Differentiation prior to passage, and recoverable attachment after passage 	Pass
Identity by STR	UW Translational Research Initiatives in Pathology Laboratory	PowerPlex 16 HS System by Promega	Defines STR profile of deposited cell line	Pass
Sterility	Steris	ST/07	Negative	Pass
Mycoplasma	WiCell	SOP-CH-044	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.

- Tra1-60 marker expression
- mRNA expression by qPCR
- Infinium[®] Expanded Multi-Ethnic Genotyping Array (MEGA^{EX})

Approval Date	Quality Assurance Approval
21-November-2019	JKG Quality Assurance

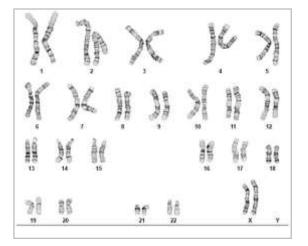
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Date Reported: Wednesday, November 13, 2019 Cell Line: MCW070i-40002330-WB67159 15117 Passage#: 16 Date of Sample: 11/5/2019 Specimen: Human IPSC Results: 46,XX Cell Line Sex: Female Reason for Testing: Lot Release Testing

Investigator:

, WiCell



Cell: 7
Slide: G01
Slide Type: Karyotype
Total Counted: 20
Total Analyzed: 8
Total Karyogrammed: 4
Band Resolution: 425 - 550

Interpretation:

This is a normal karyotype; no 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 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 or effect.

TRIPath

HISTOLOGY - IHC - MOLECULAR - IMAGING

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

Sample Report:

15117-STR Sample Name on Tube: 15117-STR 60.1 ng/μL, (A260/280=1.71) Sample Type: Cells Cell Count: ~2 million cells

Short Tandem Repeat Analysis



characterization@wicell.org (608) 316-4145

Receive Date: 11/11/19 Report Sent: 11/19/19 Assay Date: 11/13/19 File Name: STR 191113 wmr Report Date: 11/19/19

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	<u>ouppont.</u>
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 15117-STR cells submitted by WiCell QA dated and received on 11/11/19, this sample (Label on Tube: 15117-STR) defines the STR profile of the human cell line MCW070i-40002330 comprising 28 allelic polymorphisms across the 15 STR loci analyzed.

<u>Interpretation:</u> No STR polymorphisms other than those corresponding to the human MCW070i-40002330 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 15117-STR sample submitted corresponds to the MCW070i-40002330 cell line and was not contaminated with any other human 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 cell lines is ~2-5%.

X RMB	Digitally Signed on 11/19/19	X WMR Digitally Signed on 11/19/19
TRIP Labo	, BA pratory, Molecular	, PhD, Director / Co-Director 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: https://research.pathology.wisc.edu/acknowledging-trip/ 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.

Requestor: WiCell Research Institute Quality Assurance Department

Native Product Sterility Report



			SAMPLE	E #: 19050849
WiCell			DATE RECEIVE	ED: 09-May-19
504 S Rosa Road, Rm 101			TEST INITIATE	ED: 15-May-19
Madison, WI 53719			TEST COMPLETE	ED: 29-May-19
SAMPLE NAME / DESCRIPTION:	MCW057i-A3286	WB67153	14647	
	B2M-/Etrimer Elf1	WB67154	14648	
	•			
	MCW033i-A7195	WB67156	14649	
	MCW061i-40000329			
	MCW059i-40001067	WB67158	3 14651	
	MCW070i-40002330	WB67159	14652	
	B2M-/- Elf1 WB	367160 14	653	
	JHU210i WB671	62 14654		
	MCW052i-40001760	WB67163	14655	
	B2M-/Edimer Elf1	WB67155	14656	
	MCW063i-40000190	WB67164	14657	
	MCW065i-40001296	WB67165	14658	
	B2M-/Edimer(preCre	e)Elf1 WB6	57166 14659	
	MCW069i-40000268	WB67167	14660	
	MCW093i-40000435	WB67168	3 14661	
	PACS1003i-GM27161	DB67161	14662	
	STAN011i-123-1	DB31129	14663	
	STAN012i-123-2	DB31135	14664	
	STAN015i-178-1	DB31094	14665	
		DB31107	14666	
UNIQUE IDENTIFIER:	NA			

TEST RESULTS:	# Tested	# Positives (Growth)	- Control	
	20	0	2 Negatives	
TEST SUMMARY:				Incubat

EST SUMMARY:	# Samples	Media Type	Volume (mL)	Incubation Temperature (° C)	Incubation Duration (Days)
	20	TSB	40	20-25	14
	20	FTG	40	30-35	14
REFERENCE		Processed accord	ling to LAB-003. St	orility Test Procedu	Iro

REFERENCE:

PD #: TEST METHODOLOGY: Processed according to LAB-003: Sterility Test Procedure 000053 USP - Direct Transfer

Native Product Sterility Report



COMMENTS: NA

REVIEWED BY Man

DATE 29MAY19

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. Results applied to samples as received.



Mycoplasma Assay Report

PCR-based assay performed by WiCell WiCell 05Nov19

Sample Name	Result	Comments/Suggestions
MCW093i-40000435-WB67168 15115 (78976)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
MCW083i-40000695-WB67174 15114 (78977)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
MCW074i-40002460-WB67203 15118 (78978)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
MCW070i-40002330-WB67159 15117 (78979)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
WTB-DB66964 15116 (78980)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
WC051i-FX08-23-WB67327 15107 (78981)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
HNEpc p3, ARPE-19 p3 C166 p10 INC 124	Nagativa	
11/4/19 Empirico (78982)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
pHTM p5, HEK293 p5, 3T3-LI p7 INC124 11/4/19	Negative	
Empirico (78983)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
Positive (+) Control	Positive	
Negative (-) Control	Negative	

Reported by: Molly Miles, Cell Culture Specialist Reviewed by: Katie Remondini, Cell Culture Specialist

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A gel image is available upon request.