

Thaw and Culture Details

Cell Line Name	MCW062i-U2157		
WiCell Lot Number	WB67410		
Parent Material	MCW062i-U2157-DB66356		
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	08-February-2020		
Vial Label	MCW062i-U2157 p16 WB67410		
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
26-March-2020	3/26/2020 X JKG JKG Cuality Assurance Signed by: Gay, Jenna

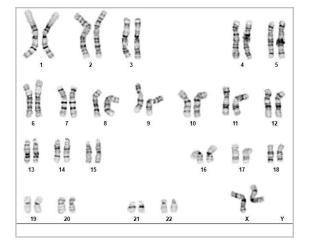
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Chromosome Analysis Report: 080728

Date Reported: Friday, March 6, 2020 Cell Line: MCW062i-U2157-WB67410 Passage#: 16 Date of Sample: 3/3/2020 Specimen: Human IPSC Results: 46,XX Cell Line Sex: Female Reason for Testing: LOT_RELEASE

Investigator: WiCell Stem Cell Bank, WiCell



Cell: 86 Slide: G03 Slide Type: Karyotype Total Counted: 20 Total Analyzed: 8 Total Karyogrammed: 4 Band Resolution: 350 - 475

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:		, Ph.D.		
Completed 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:

MCW062i-U2157-WB67410 p.16 (80728)

4.1 ng/µL, (A260/280=1.31) Sample Type: DNA Cell Count: N/A

Requestor: WiCell Research Institute **Characterization Department** Your Lab Partner

characterization@wicell.org (608) 316-4145

Receive Date: 03/09/20 **Report Sent: 03/16/20** Assav Date: 03/10/20 File Name: STR 200311 wmr **Report Date: 03/16/20**

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
TPOX	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, please, contact
CSF1PO	6-15	WiCell's Technical
D16S539	5, 8-15	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	

Results: Based on the MCW062i-U2157-WB67410 p.16 (80728) DNA submitted by WiCell Characterization Department dated and received on 03/09/20, this sample (Label on Tube: MCW062i-U2157-WB67410 p.16 (80728)) defines the STR profile of the human cell line MCW062i-U2157 comprising 24 allelic polymorphisms across the 15 STR loci analyzed.

Interpretation: No STR polymorphisms other than those corresponding to the human MCW062i-U2157 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 MCW062i-U2157-WB67410 p.16 (80728) sample submitted corresponds to the MCW062i-U2157 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 cell lines is ~2-5%.

X RMB Digitally Signed on 03/16/20	X WMR Digitally Signed on 03/16/20
, BA TRIP Laboratory, 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.





Native Product Sterility Report



WiCell 504 S Rosa Road, Rm 101 Madison, WI 53719	CORRECTED REPORT	SAMPLE #: DATE RECEIVED: TEST INITIATED: TEST COMPLETED:	20021177 20-Feb-20 21-Feb-20 06-Mar-20
SAMPLE NAME / DESCRIPTI	ON: WC070i-335-1-2-30 JHU206i MCW056i-U7076 MCW018i-A2868 MCW024i-A3263 MCW046i-U2346 STAN205i-448C2 STAN120i-192C2 MCW054i-U2073 MCW054i-U2073 MCW058i-U2082 MCW062i-U2157 MCW072i-40001708 MCW099i-40000558 MIN09i-33114.C MCW051i-40001166 MCW079i-40001456 MCW055i-U2054 MCW098i-40002583 STAN206i-459C1 STAN130i-212C4	WB67391 WB67393 WB67392 WB67397 WB67398 WB67396 WB67399 WB67406 WB67407 WB67408 WB67408 WB67410 WB67410 WB67413 WB67411 WB67412 WB67414 WB67414 WB67416 WB67417 WB67418 WB67415	

UNIQUE IDENTIFIER:

NA

TEST RESULTS:	# Tested	# 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:

Processed according to LAB-003: Sterility Test Procedure

PD #:

000053

TEST METHODOLOGY:

USP - Direct Transfer

COMMENTS: Sample #2

Sample #20021177

Report revised due to Customer request to update sample name.

REVIEWED BY

DATE OMARZOZD

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 04Mar20

Sample Name	Result	Comments/Suggestions
MCW099i-40000558-WB67411 (80709)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
MCW072i-40001708-WB67413 (80710)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
MCW102i-UR117-WB67432 (80716)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
MCW108i-U2165-WB67431 (80717)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
Elf1-WB67433 (80718)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
MCW062i-U2157-WB67410 (80719)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
INC123 02Mar20KR (80720)		Band was not seen at 270bp, indicating the absence of mycoplasma.
INC149 02Mar20AP (80721)	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.