

Thaw and Culture Details

Cell Line Name	MCW017i-A2106		
WiCell Lot Number	WB67448		
Parent Material MCW017i-A2106-DB66322			
Provider	er Medical College of Wisconsin – Laboratory of Dr. Ulrich Broeckel		
Banked By	WiCell		
Thaw and Culture WiCell recommends thawing 1 vial into 3 wells of a 6 well plate using mTeSR [™] Plus and Matrig Recommendations			
Protocol	WiCell Feeder Independent Pluripotent Stem Cell Protocol		
Culture Platform Prior to Freeze	Feeder Independent		
	Medium: mTeSR™Plus		
	Matrix: Matrigel®		
Passage Number	p21 These cells were cultured for 20 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 21.		
Date Vialed	12-March-2020		
Vial Label	MCW017i-A2106 p21 WB67448		
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	y G-banding WiCell SOP-49 Expected karyotype		Expected karyotype	See Report
Post-Thaw Viable Cell Recovery	≥ 15 Undifferentiated 0 prior to passageWiCellSOP-99≤ 30% Differentiation passage, and recover		 ≥ 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-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.

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

Approval Date	Quality Assurance Approval		
10-September-2020	9/10/0220)KG		
	Quality Assurance Signed by: Gay, Jenna		

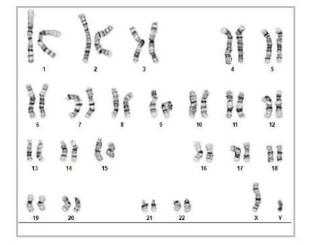
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Chromosome Analysis Report: 081803

Date Reported: Tuesday, July 7, 2020 Cell Line: MCW017i-A2106-WB67448 Passage#: 21 Date of Sample: 6/29/2020 Specimen: Human IPSC Results: 46,XY Cell Line Sex: Male Reason for Testing: LOT_RELEASE

Investigator: WiCell Stem Cell Bank, WiCell



Cell: 63 Slide: G01 Slide Type: Karyotype Total Counted: 20 Total Analyzed: 8 Total Karyogrammed: 4 Band Resolution: 400 - 450

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 are null and void and of no legal force or effect.



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



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Receive Date: 07/08/20 Report Sent: 07/15/20

Short Tandem Repeat Analysis

Requestor: WiCell Characterization

Label on tube	MCW017i-A2106- WB67448 p.21 (81803)	MIN12i-33362.C- WB67499 p.21 (81802)	MCW017i-A2106- WB67449 p.21 (81829)
Label on Report conc (ng/μL) A260/280 Assay Date File Name FGA TPOX D8S1179 vWA Amelogenin Penta_D CSF1PO D16S539 D7S820 D13S317 D5S818 Penta_E D18S51 D21S11 TH01 D3S1358		Identifying information has been redacted to protect donor confidentiality. If more information is required, please, contact WiCell's Technical Support.	
Allelic Polymorphisms	24	26	24
Matches*	81829	79071, 73313, 32535	81803
Comments			





Your Lab Partner characterization@wicell.org (608) 316-4145

Short Tandem Repeat Analysis

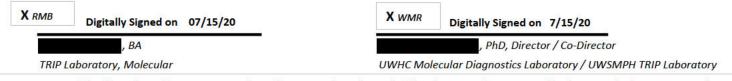
<u>Results:</u> Based on the DNA submitted by WiCell Characterization Department dated and received on 07/08/20, these samples define the STR profiles of the human cell lines as indicated by name. The genotypic profiles comprise a range of 24-26 allelic polymorphisms across the 15 STR loci analyzed.

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%.

Acknowledge TRIP in your publications, posters & presentations. For details, see: https://research.pathology.wisc.edu/acknowledging-trip/

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



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. 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.

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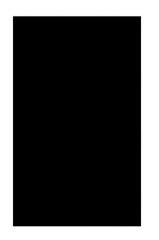
Native Product Sterility Report



SAMPLE #:20080705DATE RECEIVED:13-Aug-20TEST INITIATED:20-Aug-20TEST COMPLETED:03-Sep-20

WiCell 504 S Rosa Road, Rm 101 Madison, WI 53719

SAMPLE NAME / DESCRIPTION:



H9 inGFPhES-WB67521

MCW017i-A2106-WB67449

MCW017i-A2106-WB67448

STAN215i-490C3-WB67522

SCRP0517i-DB42022

SCRP0601i-DB42025

UNIQUE IDENTIFIER:

N/A

TEST RESULTS:

rs:	# 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:

STERIS Laboratories 9303 West Broadway Ave Brooklyn Park, MN 55445 Processed according to LAB-003: Sterility Test Procedure

Native Product Sterility Report



PD #: TEST METHODOLOGY: 000053 USP - Direct Transfer

COMMENTS: Sample # 20080705

REVIEWED BY _____

DATE 03 SEP 2020

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 01Jul20

Sample Name	Result	Comments/Suggestions
MCW017i-A2106-WB67448 (81798)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
MCW017i-A2106-WB67449 (81799)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
MIN12i-33362.C-WB67499 (81800)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
WISCe011-A-39-DB67487 (81801)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
H13-FMR1-FLAG-DB67481 (81806)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
H1-FMR1-FLAG-DB67478 (81807)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
Positive (+) Control	Positive	
Negative (-) Control	Negative	

Reported by: Assistant Cell Culture Specialist Reviewed by: Cell Culture Specialist

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A gel image is available upon request.