Thaw and Culture Details

Cell Line Name	MCW038i-40000503
WiCell Lot Number	WB66475
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 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 16.
Date Vialed	10-August-2017
Vial Label	MCW038i-40000503 p16 WB66475
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 Promega	Defines profile	Pass
Sterility	Steris	ST/07	Negative	Pass
Mycoplasma	WiCell	SOP-QU-004	Negative	Pass

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.

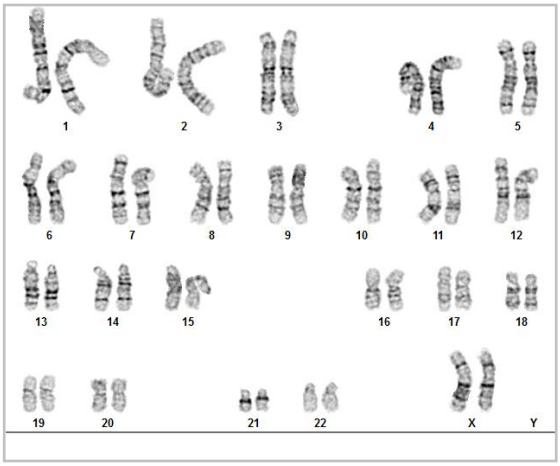
- Tra1-60 marker expression
- mRNA expression by qPCR
- Infinium® Expanded Multi-Ethnic Genotyping Array (MEGA^{EX})

Approval Date	Quality Assurance Approval
14-May-2018	9/27/2018 X JKG JKG Quality Assurance Signed by: Gay, Jenna

Updated Chromosome Analysis Report: 073077

Date Reported: Monday, September 17, 2018
Cell Line: MCW038i-40000503-WB66475 13786
Passage#: 17
Date of Sample: 9/5/2018
Specimen: Human IPS
Results: 46,XX

Cell Line Sex: Female
Reason for Testing: lot release testing
Investigator: [redacted], WiCell



Cell: 18
Slide: G03
Slide Type: Karyotype

Total Counted: 20
Total Analyzed: 8
Total Karyogrammed: 4
Band Resolution: 400 - 500

Interpretation (Updated):

This is a normal karyotype; no clonal abnormalities were detected at the stated band level of resolution. This report has been updated to correct the cell line name at the request of the client on 14Sep2018.

Interpretation:

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

Completed by: [redacted], CG(ASCP)
Reviewed and Interpreted by: [redacted], PhD, 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".

TRIPath
HISTOLOGY - IHC - MOLECULAR - IMAGING
Department of Pathology and Laboratory Medicine
TRIP Laboratory (Molecular)
http://www.pathology.wisc.edu/research/trip

Short Tandem Repeat Analysis

WiCell®
info@wicell.org
(888) 204-1782

Sample Report:
13786-STR
Sample Name on Tube: 13786-STR
76.8 ng/µL, (A260/280=1.82)
Sample Type: Cells
Cell Count: ~2 million cells

Requestor:
WiCell Research Institute
Quality Department

Sample Date: N/A
Receive Date: 09/10/18
Assay Date: 09/17/18
File Name: STR 190918 repeat
Report Date: 09/19/18

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	Identifying information has been redacted to protect donor confidentiality. If more information is required, please, contact WiCell's Technical Support.
TPOX	6-13	
D8S1179	7-18	
vWA	10-22	
Amelogenin	X,Y	
Penta_D	2.2, 3.2, 5, 7-17	
CSF1PO	6-15	
D16S539	5, 8-15	
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 13786-STR cells submitted by WiCell QA dated and received on 09/10/18, this sample (Label on Tube: 13786-STR) defines the STR profile of the human stem cell line MCW038i-40000503 comprising 27 allelic polymorphisms across the 15 STR loci analyzed.

<u>Interpretation:</u> No STR polymorphisms other than those corresponding to the human MCW038i-40000503 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 13786-STR sample submitted corresponds to the MCW038i-40000503 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 09/20/18**

[redacted], *BA*
TRIP Laboratory, Molecular

X *WMR* **Digitally Signed on 09/20/18**

[redacted] *PhD, Director / Co-Director*
UWHC Molecular Diagnostics Laboratory / UWSMPH TRIP Laboratory

Native Product Sterility Report

STERIS

CORRECTED REPORT

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

SAMPLE #:	18020925
DATE RECEIVED:	15-Feb-18
TEST INITIATED:	20-Feb-18
TEST COMPLETED:	06-Mar-18

SAMPLE NAME / DESCRIPTION:

UCSD084i-6-1 WB61879 13391,UCSD089i-15-1 WB61822 13392
UCSD131i-77-1 WB62260 13393, UCSD134i-80-1 WB62286 13394
UCSD145i-89-1 WB61873 13395, UCSD156i-12-2 WB61889 13396
UCSD171i-100-1 WB62271 13397, UCSD174i-18-2 WB62018 13398
UCSD183i-102-1 WB62287 13399, UCSD186i-103-1 WB62268 13400
UCSD211i-32-1 WB62424 13401, UCSD087i-6-4 WB63448 13402
UCSD090i-15-2 WB62824 13403, UCSD120i-39-1 WB63446 13404
UCSD124i-7-1 WB62648 13405, UCSD149i-10-4 WB63469 13406
UCSD169i-22-2 WB63540 13407, UCSD203i-109-1 WB62436 13408
UCSD096i-34-1 WB64879 13409, UCSD101i-36-2 WB63523 13410
UCSD121i-39-2 WB64666 13411, UCSD122i-73-1 WB63538 13412
UCSD130i-76-1 WB64881 13413, UCSD138i-84-1 WB63874 13414
UCSD141i-37-2 WB65028 13415, UCSD144i-88-1 WB63539 13416
UCSD157i-12-3 WB64922 13417, UCSD159i-91-1 WB64880 13418
UCSD123i-74-1 WB53944 13419, UCSD126i-7-3 WB53933 13420
UCSD185i-8-2 WB54165 13421, UCSD086i-6-3 WB58711 13422
UCSD091i-15-3 WB58791 13423, UCSD118i-38-1 WB57664 13424
UCSD127i-7-4 WB58690 13425, UCSD137i-83-1 WB58970 13426
UCSD142i-86-1 WB58721 13427, UCSD146i-10-1 WB58698 13428
UCSD148i-10-3 WB58204 13429, UCSD162i-94-1 WB58792 13430
UCSD176i-17-1 WB58933 13431, UCSD177i-17-2 WB57849 13432
UCSD202i-108-1 WB57850 13433, UCSD205i-110-1 WB58200 13434
MCW038i-40000503 WB66475 13435, MCW005i-40002552 WB66498 13436
MCW019i-A7230 WB66534 13437, MCW022i-A2965 WB66509 13438
MCW023i-A2121 WB66535 13439, MCW027i-50000784 WB66536 13440

UNIQUE IDENTIFIER: NA

PRODUCT REGISTRATION: Other: Human iPS cells

Native Product Sterility Report

STERIS

TEST RESULTS:

# Tested	# Positives (Growth)	- Control
50	0	Negative

TEST SUMMARY:

# Samples	Media Type	Volume (mL)	Incubation Temperature (° C)	Incubation Duration (Days)
50	TSB	40	20-25	14
50	FTG	40	30-35	14

REFERENCE: Processed according to LAB-003: Sterility Test Procedure

METHOD VALIDATION / PD #: 000053

TEST METHODOLOGY: USP - Direct Transfer

COMMENTS: Report revised due to incorrect Volume.

Sample #18020925

"Reported As" per packing slip

REVIEWED BY _____ DATE 11OCT18

Mycoplasma Detection Assay Report

Testing Performed by WiCell

Lot Release Testing

August 29, 2018

FORM SOP-QU-004.01
Version G Edition 02
Reported by: AP
Reviewed by: SM
BD Monolight 180

#	Sample Name	Reading A		A Ave	Reading B		B Ave	Ratio B/A	Result	Comments/Suggestions
		RLU1	RLU2		RLU1	RLU2				
1	MCW038i-40000503-WB66475 13786	239	269	254	85	88	86.5	0.34	Negative	
2	Positive (+) Control	358	377	367.5	60649	60575	60612	164.93	Positive	
3	Negative (-) Control	800	810	805	98	99	98.5	0.12	Negative