Thaw and Culture Details

Cell Line Name	**MCW072i-40001708**
WiCell Lot Number	**WB67413**
Parent Material	MCW072i-40001708-DB66366
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	09-February-2020
Vial Label	MCW072i-40001708 p16 WB67413
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
	Results: 46,XX,der(18)t(1;18)(q12;q21.1)[2]/46,XX[18] ***Interpretation:*** This is an abnormal karyotype. Two of twenty cells examined contain an unbalanced rearrangement of chromosome 18 in which an extra copy of the long (q) arm of chromosome 1 was translocated to the long arm of chromosome 18. The derivative chromosome 18 results in loss of chromosome 18q and gain of chromosome 1q. Gain of chromosome 1q and loss of chromosome 18q are recurrent acquired abnormalities in pluripotent stem cell cultures. No other clonal abnormalities were detected at the stated band level of resolution.			
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

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.

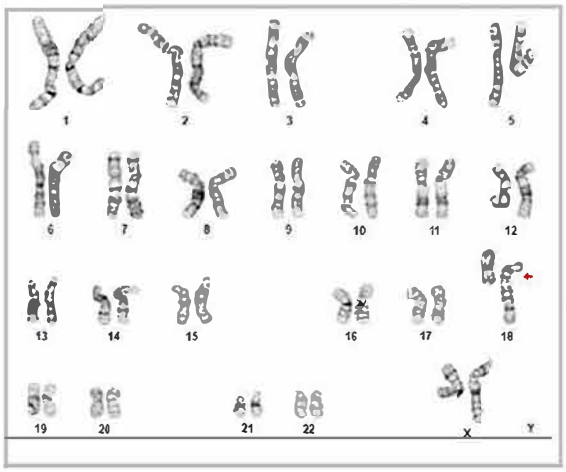
- Tra1-60 marker expression
- mRNA expression by qPCR
- Infinium® Expanded Multi-Ethnic Genotyping Array (MEGA^{EX})

Approval Date	Quality Assurance Approval
21-May-2020	5/21/2020 X JKG JKG Quality Assurance Signed by: Gay, Jenna

Chromosome Analysis Report: 080714

Date Reported: Friday, March 6, 2020
Cell Line: MCW072i-40001708-WB67413
Passage#: 16
Date of Sample: 3/2/2020
Specimen: Human IPSC
Results: 46,XX,der(18)t(1;18)(q12;q21.1)[2]/46,XX[18]

Cell Line Sex: Female
Reason for Testing: LOT_RELEASE
Investigator: WiCell Stem Cell Bank, WiCell



Cell: 32
Slide: G01
Slide Type: Karyotype

Total Counted: 20
Total Analyzed: 8
Total Karyogrammed: 5
Band Resolution: 400 - 525

Interpretation:

This is an abnormal karyotype. Two of twenty cells examined contain an unbalanced rearrangement of chromosome 18 in which an extra copy of the long (q) arm of chromosome 1 was translocated to the long arm of chromosome 18. The derivative chromosome 18 results in loss of chromosome 18q and gain of chromosome 1q. Gain of chromosome 1q and loss of chromosome 18q are recurrent acquired abnormalities in pluripotent stem cell cultures. No other clonal abnormalities were detected at the stated band level of resolution.

Completed by: [redacted]
Reviewed and Interpreted by: [redacted], 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".

Short Tandem Repeat Analysis

TRIPath
HISTOLOGY - IHC - MOLECULAR - IMAGING

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

WiCell
Your Lab Partner

characterization@wicell.org
(608) 316-4145

Sample Report:
MCW072i-40001708-WB67413 p.16 (80714)

31.0 ng/µL, (A260/280=1.64)
Sample Type: DNA
Cell Count: N/A

Requestor:
WiCell Research Institute
Characterization Department

Receive Date: 03/09/20
Report Sent: 20/03/16
Assay 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 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	

Results: **Based on the MCW072i-40001708-WB67413 p.16 (80714) DNA submitted by WiCell Characterization Department dated and received on 03/09/20, this sample (Label on Tube: MCW072i-40001708-WB67413 p.16 (80714)) defines the STR profile of the human cell line MCW072i-40001708 comprising 26 allelic polymorphisms across the 15 STR loci analyzed.**

Interpretation: **No STR polymorphisms other than those corresponding to the human MCW072i-40001708 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 MCW072i-40001708-WB67413 p.16 (80714) sample submitted corresponds to the MCW072i-40001708 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**

[redacted], *BA*
TRIP Laboratory, Molecular

X *WMR* **Digitally Signed on 03/16/20**

[redacted], *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/***

Native Product Sterility Report

STERIS

CORRECTED REPORT

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

SAMPLE #:	20021177
DATE RECEIVED:	20-Feb-20
TEST INITIATED:	21-Feb-20
TEST COMPLETED:	06-Mar-20

SAMPLE NAME / DESCRIPTION:

WC070i-335-1-2-30	WB67391
JHU206i	WB67393
MCW056i-U7076	WB67392
MCW018i-A2868	WB67397
MCW024i-A3263	WB67398
MCW046i-U2346	WB67396
STAN205i-448C2	WB67399
STAN120i-192C2	WB67406
MCW054i-U2073	WB67407
MCW058i-U2082	WB67408
MCW062i-U2157	WB67410
MCW072i-40001708	WB67413
MCW099i-40000558	WB67411
MIN09i-33114.C	WB67412
MCW051i-40001166	WB67409
MCW079i-40001456	WB67414
MCW055i-U2054	WB67416
MCW098i-40002583	WB67417
STAN206i-459C1	WB67418
STAN130i-212C4	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

STERIS

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

PD #: 000053

TEST METHODOLOGY: USP - Direct Transfer

COMMENTS: Sample #20021177

Report revised due to Customer request to update sample name.

REVIEWED BY _____ DATE 10MAR2020

Mycoplasma Assay Report

PCR-based assay performed by WiCell

WiCell

04Mar20

FORM SOP-CH-048.01
Version B Edition 01

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)	Negative	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: [redacted], **Cell Culture Specialist**
Reviewed by: [redacted], **Cell Culture Specialist**

A gel image is available upon request.