

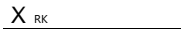


Thaw and Culture Details

Cell Line Name	MCW086i-40000176
WiCell Lot Number	WB66545
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	p13 These cells were cultured for 12 passages prior to colony picking. WiCell adds +1 to the passage number to best represent the overall passage number of the cells at thaw.
Date Vialied	22-August-2017
Vial Label	MCW086i-40000176 p13 WB66545
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	Pass
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

Approval Date	Quality Assurance Approval
18-October-2017	<div style="text-align: right;">10/18/2017</div> <div style="text-align: center;">  RK Quality Assurance Signed by: Kremers, Erik </div>

Date Reported: Wednesday, September 13, 2017

Cell Line Gender: Male

Cell Line: MCW086i-40000176-WB66545
12801

Reason for Testing: lot release testing

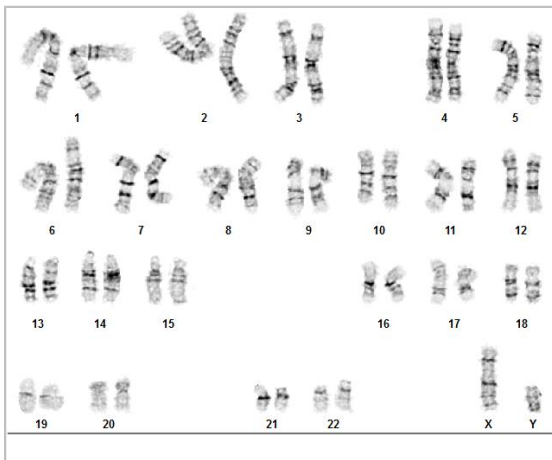
Passage#: 13

Date of Sample: 8/31/2017

Investigator: [REDACTED]

Specimen: Human IPS

Results: 46,XY



Cell: 29

Slide: G02

Slide Type: Karyotype

Total Counted: 20

Total Analyzed: 8

Total Karyogrammed: 4

Band Resolution: 475 - 550

Interpretation:

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

Completed by: [REDACTED]

Reviewed and Interpreted by: [REDACTED]

A signed copy of this report is available upon request.

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 may not be relied upon by any other party without the prior written consent of the Director of the WiCell Cytogenetics Laboratory. The results of this assay are for research use only. If the results of this assay are to be used for any other purpose, contact the Director of the WiCell Cytogenetics Laboratory.

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.

Short Tandem Repeat Analysis

Department of Pathology and Laboratory Medicine
TRIP Laboratory (Molecular)
<http://www.pathology.wisc.edu/research/trip>

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

Sample Report:

12801-STR
Sample Name on Tube: 12801-STR
57.3 ng/μL, (A260/280=2.10)
Sample Type: Cells
Cell Count: ~2 million cells

Requestor:

WiCell Research Institute
Quality Department

Sample Date: N/A

Receive Date: 09/05/17
Assay Date: 09/12/17
File Name: 170913 STR WMR
Report Date: 09/15/17

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 12801-STR cells submitted by WiCell QA dated and received on 09/05/17, this sample (Label on Tube: 12801-STR) defines the STR profile of the human stem cell line MCW086i-40000176 comprising 28 allelic polymorphisms across the 15 STR loci analyzed.

Interpretation: No STR polymorphisms other than those corresponding to the human MCW086i-40000176 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 12801-STR sample submitted corresponds to the MCW086i-40000176 stem 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 stem cell lines is ~2-5%.

X_{RMB}

Digitally Signed on 09/15/17

X_{WMR}

Digitally Signed on 09/15/17

TRIP Laboratory, Molecular

PhD, Director / Co-Director
UWHC Molecular Diagnostics Laboratory / UWSMPH TRIP Laboratory

Native Product Sterility Report



**CORRECTED
REPORT**

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

SAMPLE #: 17090875
DATE RECEIVED: 14-Sep-17
TEST INITIATED: 18-Sep-17
TEST COMPLETED: 02-Oct-17

SAMPLE NAME / DESCRIPTION: MCW003i-40001883-WB66553_12835, MCW047i-U2234-WB66549_12836, MCW071i-U2177-WB66552_12837, MCW086i-40000176-WB66545_12838, MCW090i-40000374-WB66557_12839, MCW091i-U2202-WB66554_12840, MCW097i-400001654-WB66548_12841, MCW112i-40000893-WB66551_12842, MCW116i-40001890-WB66550_12843, MCW073i-40000527-WB66570_12844, MCW060i-U2183-WB66559_12845, JFHZ4-WB66573_12846, JFHZ5-WB66587_12847, JFHZ6-WB66583_12848, JFMD6-WB66581_12849, JFNY2-WB66584_12850, JFRBi5-WB66569_12851, JFWT2-WB66586_12852, JFWT4-WB66582_12853, UCSD239i-APP2-1-WB66585_12854, MCW100i-U2341-WB66575_12881, MCW114i-U2144-WB66566_12882, iPS(IMR90)-2-WB66588_12883, UCSD035i-4-4-WB62259_12884, UCSD064i-20-2-WB63303_12885, UCSD143i-87-1-WB57685_12886, UCSD161i-93-1-WB54536_12887, UCSD199i-107-1-WB59910_12888, UCSD209i-24-1-WB57661_12889, UCSD081i-1-14-WB61903_12890

UNIQUE IDENTIFIER: NA
PRODUCT REGISTRATION: Other: Human iPS Cells

TEST RESULTS:

# Tested	# Positives (Growth)	- Control
30	0	2 Negatives

TEST SUMMARY:

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

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

Native Product Sterility Report

**CORRECTED
REPORT**



STERIS

COMMENTS:

Sample # 17090875

Report revised due to Customer request to update Sample Name / Description.

REVIEWED BY _____

DATE _____

09/04/17

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.



Mycoplasma Detection Assay Report

Testing Performed by WiCell

Lot Release Testing

August 30, 2017

FORM SOP-QU-004.01

Version F Edition 02

Reported by: KR

Reviewed by:

BD Monolight 180

#	Sample Name	Reading A			Reading B			Ratio B/A	Result	Comments/Suggestions
		RLU1	RLU2	Ave	RLU1	RLU2	Ave			
1	MCW086i-40000176-WB66545 12801	259	264	261.5	80	77	78.5	0.30	Negative	
2	Positive (+) Control	387	395	391	25241	25413	25327	64.77	Positive	
3	Negative (-) Control	573	581	577	66	63	64.5	0.11	Negative	

