

Thaw and Culture Details

Cell Line Name	MCW097i-40001654						
WiCell Lot Number	WB66548						
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	Feeder Independent E8 Medium Protocol						
Passage Number	p13 These cells were cultured for 12 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 13.						
Date Vialed	24-August-2017						
Vial Label	MCW097i-40001654 p13 WB66548						
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})

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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.



Approval Date	Quality Assurance Approval
14-May-2018	1/17/2019 JKG Quality Assurance Signed by Gay, Jenna

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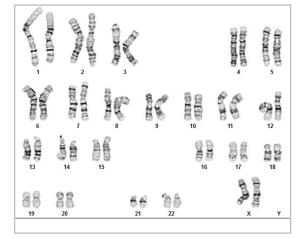
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Date Reported: Friday, January 18, 2019 Cell Line: MCW097i-40001654-WB66548 14193

Passage#: 13 Date of Sample: 12/18/2018 Specimen: Human IPS Results: 46,XX Cell Line Sex: Female Reason for Testing: lot release testing

Investigator: Sondra Minter, WiCell



Cell: 6 Slide: G01 Slide Type: Karyotype

Total Counted: 20 Total Analyzed: 9 Total Karyogrammed: 4 Band Resolution: 425 - 525

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 reason for testing at the request of the client on 17Jan2019.

Interpretation:

This is a normal karyotype; no clonal abnormalities were detected at the stated band level of resolution.Completed by:Dawn Davis, CG(ASCP)Reviewed and Interpreted by:Jennifer Laffin, 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".

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/ (608) 265-9168

Sample Report:

14193-STR Sample Name on Tube: 14193-STR 101.6 ng/μL, (A260/280=1.86) Sample Type: Cells Cell Count: ~2 million cells **Requestor:** WiCell Research Institute Quality Assurance Department

Short Tandem Repeat

Analysis



characterization@wicell.org (608) 316-4145

Receive Date: 01/02/19 **Report Sent:** 01/07/19 **Assay Date:** 01/02/19 **File Name:** STR 190103 revised wmr **Report Date:** 01/07/19

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
ТРОХ	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,
CSF1PO	6-15	please, contact 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	

<u>Results:</u> Based on the 14193-STR cells submitted by WiCell QA dated and received on 01/02/19, this sample (Label on Tube: 14193-STR) defines matches the STR profile of the human stem cell line MCW097i-40001654 comprising 23 allelic polymorphisms across the 15 STR loci analyzed.

<u>Interpretation:</u> No STR polymorphisms other than those corresponding to the human MCW097i-40001654 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 14193-STR sample submitted corresponds to the MCW097i-40001654 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 01/07/19	X WMR	Digitally Signed on 01/07/19
•	TRIP La	, BA boratory, Molecular	UWHC Mole	, PhD, Director / Co-Director ecular 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: http://www.pathology.wisc.edu/research/trip/acknowledging 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 Rd, Rm 101 Madison, WI 53719	CORRECTED REPORT	SAMPLE #: DATE RECEIVED: TEST INITIATED: TEST COMPLETED:	17090875 14-Sep-17 18-Sep-17 02-Oct-17
SAMPLE NAME / DESCRIPTION:	MCW071i-U2177-WB66552_ MCW090i-40000374-WB6655 MCW097i-400001654-WB665 WB66551_12842, MCW116i- WB66570_12844, MCW060i- JFHZ5-WB66587_12847, JFHZ JFNY2-WB66584_12850, JFRE JFWT4-WB66582_12853, UCS U2341-WB66575_12881, MC WB66588_12883, UCSD035i- WB63303_12885, UCSD143i-	53_12835, MCW047i-U2234-WB6654 12837, MCW086i-40000176-WB6654 57_12839, MCW091i-U2202-WB6655 548_12841, MCW112i-40000893- 40001890-WB66550_12843, MCW07 U2183-WB66559_12845, JFHZ4-WB6 26-WB66583_12848, JFMD6-WB6658 515-WB66569_12851, JFWT2-WB6658 515-WB66569_12851, JFWT2-WB6658 50239i-APP2-1-WB66585_12854, MC W114i-U2144-WB66566_12882, iPS(4-4-WB62259_12884, UCSD064i-20-2 87-1-WB57685_12886, UCSD161i-93- 107-1-WB59910_12888, UCSD209i-24 1-14-WB61903_12890	5_12838, 4_12840, 3i-40000527- 6573_12846, 1_12849, 36_12852, W100i- IMR90)-2- 2- -1-
PRODUCT RECISTRATION	Others Human iPS Calls		

U PRODUCT REGISTRATION:

Other: Human iPS Cells

Positives

TEST RESULTS:

	# Tested	(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: METHOD VALIDATIO TEST METHODOLOG		Processed accord 000053 USP - Direct Tran	-	terility Test Procedu	ire

Native Product Sterility Report



COMMENTS:

Sample # 17090875 Report revised due to Customer request to update Sample Name / Description.

REVIEWED BY

DATE

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

Testing Performed by WiCell Lot Release Testing December 20, 2018 FORM SOP-QU-004.01 Version G Edition 02 Reported by: AP Reviewed by: JB BD Monolight 180

		Reading A A R		Read	ling B	В	Ratio			
#	Sample Name	RLU1	RLU2	Ave	RLU1	RLU2	Ave	B/A	Result	Comments/Suggestions
1	MCW097i-40001654-WB66548 14193	238	238	238	74	71	72.5	0.30	Negative	
2	Positive (+) Control	397	396	396.5	30524	30825	30675	77.36	Positive	
3	Negative (-) Control	710	724	717	106	97	101.5	0.14	Negative	

