Thaw and Culture Details

Cell Line Name	**iPS(IMR90)-4**
WiCell Lot Number	**WB65316**
Parent Material	iPS(IMR90)-4-MCB-01
Provider	University of Wisconsin – Dr. James Thomson
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: mTeSR™1
	Matrix: Matrigel®
Protocol	WiCell Feeder Independent mTeSR™1 Protocol
Passage Number	p32 These cells were cultured for 31 passages post reprogramming, at least 6 of them in mTeSR™1/ Matrigel®. WiCell adds +1 to the passage number to best represent the overall passage number of the cells at thaw. Fibroblasts were reprogrammed at p18.
Date Vialed	15-May-2017
Vial Label	iPS(IMR90)-4 p18+32 WB65316
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
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	Consistent with STR profile of deposited cell line	Pass
Sterility	Biotest Laboratories	ST/07	Negative	Pass
Mycoplasma	WiCell	SOP-QU-004	Negative	Pass
Karyotype by G-banding	WiCell	SOP-CH-003	Expected karyotype	Pass

Approval Date	Quality Assurance Approval
05-July-2017	7/14/2020 X AA AA Quality Assurance Signed by: Arntz, Andy

Short Tandem Repeat Analysis

School of Medicine and Public Health
UNIVERSITY OF WISCONSIN-MADISON
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:
12531-STR
Sample Name on Tube: 12531-STR
55.9 ng/µL, (A260/280=2.09)
Sample Type: Cells
Cell Count: ~2 million cells

Requestor:
WiCell Research Institute
Quality Department

Sample Date: N/A
Receive Date: 05/30/17
Assay Date: 05/30/17
File Name: STR 170531 wmr
Report Date: 06/02/17

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 12531-STR cells submitted by WiCell QA dated and received on 05/30/17, this sample (Label on Tube: 12531-STR) exactly matches the STR profile of the human stem cell line iPS(IMR90)-4 comprising 28 allelic polymorphisms across the 15 STR loci analyzed.**

Interpretation: **No STR polymorphisms other than those corresponding to the human iPS(IMR90)-4 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 12531-STR submitted corresponds to the iPS(IMR90)-4 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 06/05/17**

[redacted]
TRIP Laboratory, Molecular

X *WMR* **Digitally Signed on 06/05/17**

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

Native Product Sterility Report

STERIS

SAMPLE #:	17060070
DATE RECEIVED:	01-Jun-17
TEST INITIATED:	02-Jun-17
TEST COMPLETED:	16-Jun-17

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

SAMPLE NAME / DESCRIPTION:
iPS(IMR90)-4 WB65317 12534
iPS(IMR90)-4 WB65316 12535
HVRDi002-A WB65326 12536
LT2e-H9CAGGFP WB38197 12537
H9 hNanog-pGZ WB35898 12538
UCSD001i-5-1 WB54521 12539
UCSD009i-5-2 WB61622 12540
USCD010i-5-3 WB57058 12541
UCSD011i-5-4 WB64802 12542
UCSD012i-5-5 WB54412 12543

CORRECTED REPORT

UNIQUE IDENTIFIER: NA

PRODUCT REGISTRATION: Human iPS cells

TEST RESULTS:

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

METHOD VALIDATION / PD #: 000053

TEST METHODOLOGY: USP - Direct Transfer

COMMENTS: Report revised due to corrected Sample Name.

REVIEWED BY _____ DATE 20JUN17

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

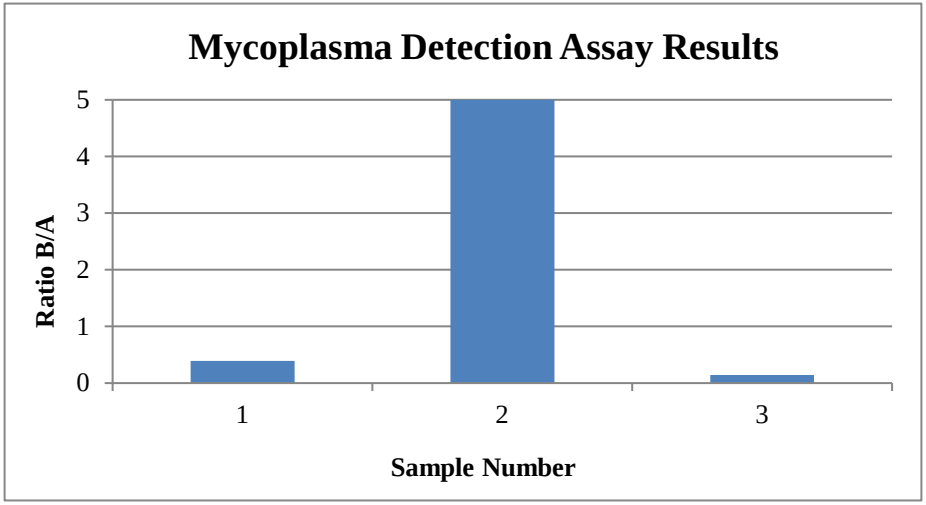
Testing Performed by WiCell

Lot Release Testing

May 22, 2017

FORM SOP-QU-004.01
Version F Edition 02
Reported by: KR
Reviewed by: JB
BD Monolight 180

#	Sample Name	Reading A		A Ave	Reading B		B Ave	Ratio B/A	Result	Comments/Suggestions
		RLU1	RLU2		RLU1	RLU2				
1	iPS(IMR90)-4-WB65316 12531	299	297	298	123	110	116.5	0.39	Negative	
2	Positive (+) Control	443	464	453.5	25905	26199	26052	57.45	Positive	
3	Negative (-) Control	621	643	632	89	89	89	0.14	Negative	

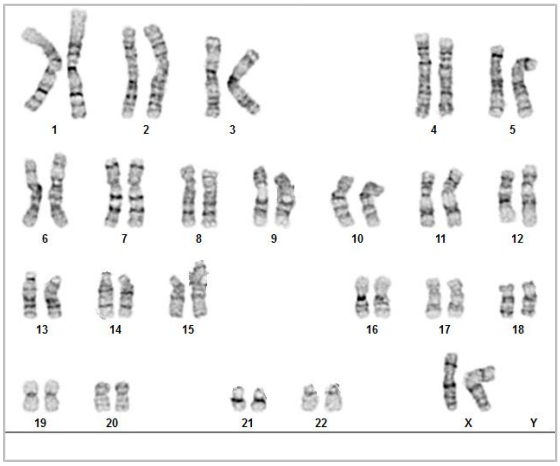


Chromosome Analysis Report: 065703

Date Reported: Wednesday, May 31, 2017
Cell Line: iPS(IMR90)-4-WB65316 12531
Passage#: 18+32
Date of Sample: 5/22/2017
Specimen: iPSC
Results: 46,XX

Cell Line Gender: Female
Reason for Testing: lot release testing

Investigator: [redacted], WiCell CDM



Cell: 14
Slide: 2
Slide Type: Karyotype

Total Counted: 20
Total Analyzed: 8
Total Karyogrammed: 4
Band Resolution: 450 - 500

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

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 resu lts 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.

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