Thaw and Culture Details

Cell Line Name	UWWC1-DS2U
WiCell Lot Number	WB19012
Provider	University of Wisconsin - Dr. Anita Bhattacharyya
Banked By	WiCell
Thaw and Culture Recommendations	WiCell recommends thawing 1 vial into 4 wells of a 6 well plate.
Culture Platform	Feeder Independent
	Medium: mTeSR™1
	Matrix: Matrigel®
Protocol	WiCell Feeder Independent mTeSR™1 Protocol
Passage Number	p53 These cells were cultured for 52 passages prior to freeze. WiCell adds +1 to the passage number at freeze so that the number on the vial best represents the overall passage number of the cells at thaw.
Date Vialed	24-April-2015
Vial Label	UWWC1-DS2U p53 WB19012
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	Consistent with known profile	Pass
Sterility	Steris	ST/07	Negative	Pass
Mycoplasma	WiCell	SOP-QU-004	Negative	Pass

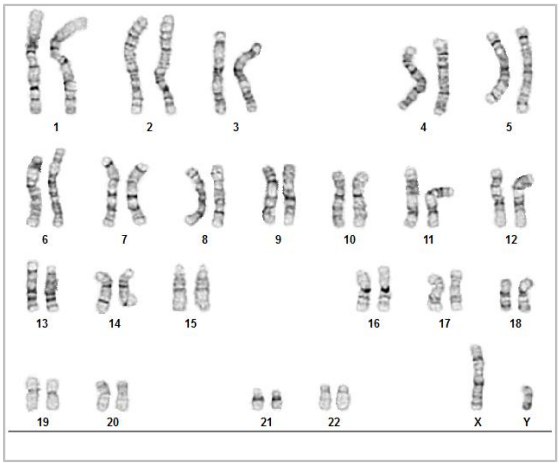
Approval Date	Quality Assurance Approval
22-November-2017	11/22/2017 X JKG JKG Quality Assurance Signed by: Gay, Jenna

Chromosome Analysis Report: 068968

Date Reported: Monday, November 06, 2017
Cell Line: UWWC1-DS2U-WB19012 12982
Passage#: 53
Date of Sample: 10/30/2017
Specimen: Human IPSC
Results: 46,XY

Cell Line Gender: Male
Reason for Testing: lot release testing
Investigator: [redacted], WiCell CDM

Nonclonal findings: 47,XY,+8



Cell: 6
Slide: G03
Slide Type: Karyotype

Total Counted: 40
Total Analyzed: 8
Total Karyogrammed: 4
Band Resolution: 425 - 550

Interpretation:

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

There is one nonclonal finding, listed above. Standard analysis requires that chromosomes are counted in twenty cells. Twenty additional cells were examined with no further evidence of this nonclonal aberration. Nonclonal findings likely result from technical artifact, but may be due to a developing clonal abnormality or to low-level mosaicism.

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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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:
12982-STR
Sample Name on Tube: 12982-STR
98.5 ng/µL, (A260/280=2.03)
Sample Type: Cells
Cell Count: ~2 million cells

Requestor:
WiCell Research Institute
Quality Department

Sample Date: N/A
Receive Date: 11/06/17
Assay Date: 11/07/17
File Name: STR 171108 wmr
Report Date: 11/13/17

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 12982-STR cells submitted by WiCell QA dated and received on 11/06/17, this sample (Label on Tube: 12982-STR) exactly matches the STR profile of the human stem cell line UWWC1-DS2U comprising 29 allelic polymorphisms across the 15 STR loci analyzed.

Interpretation: No STR polymorphisms other than those corresponding to the human UWWC1-DS2U 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 12982-STR sample submitted corresponds to the UWWC1-DS2U 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 11/13/17**

[redacted], *BA*
TRIP Laboratory, Molecular

X *WMR* **Digitally Signed on 11/13/17**

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

Sterility Report

Biotest Laboratories, Inc.
Making life-saving products possible

WiCell Research Institute, Inc.
WiCell Quality Assurance
505 South Rosa Road, Suite 120
Madison, WI 53719

BIOTEST SAMPLE #	15050336
VALIDATION #	NG
TEST PURPOSE	NG

PRODUCT	WIP05i-iPSCas9KO-WB17902 11253 RUES3-DB18144 11255 WC005i-FX11-7-WB18030 11256 WIC02i-02-05-WB18279 11257 PACT-ESC-WA01-RB18519 11258 PACT-ESC-WA01-RB18522 11259 WIP07e-H9Cas9Het-WB18521 11260 WIP06i-iPSCas9Het-WB18520 11261 UWWC1-DS4-WB18225 11262 UWWC1-2DS3-WB18532 11263 WC-24-02-DS-C-WB18862 11264 WC-24-02-DS-B-WB18712 11265 WC-24-02-DS-M-WB18754 11266 UWWC1-DS2U-WB19012 11267 WIC07i-07982-4-WB18972 11268 WC-24-02-DS-P-WB18907 11269 WC-24-02-DS-A-WB18711 11270 WC-24-02-DS-O-WB19180 11271 WC-3801-5-WB16647 11272
PRODUCT LOT	NA
STERILE LOT	NA
STERILIZATION LOT	NA
STERILIZATION DATE	NA
STERILIZATION METHOD	NA
SAMPLING BLDG / ROOM	NA

BI LOT	NA
BI EXPIRATION DATE	NA
DATE RECEIVED	2015-05-06
TEST INITIATED	2015-05-07
TEST COMPLETED	2015-05-21

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

Nineteen (19) products were each divided between 40 mL TSB and 40 mL FTG. The samples were then cultured at 20-25 C and 30-35 C respectively and were monitored for a minimum of 14 days.

☒ USP
☐ BI Manufacturers Specifications
☐ Other

BIOTEST SAMPLE # 15050336

RESULTS	# POSITIVES	# TESTED	POSITIVE CONTROL	NEGATIVE CONTROL
Non-Sterile	1	19	NA	2 Negatives

COMMENTS One (1) sample labeled as WC-24-02-DS-M-WB18754 11266 had growth in FTG.

REVIEWED BY _____ DATE 26 MAY 15

Mycoplasma Detection Assay Report

Testing Performed by WiCell

Lot Release Testing

November 2, 2017

FORM SOP-QU-004.01
Version G 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	UWWC1-DS2U-WB19012 12982	225	224	224.5	121	106	113.5	0.51	Negative	
2	Positive (+) Control	323	311	317	28241	28381	28311	89.31	Positive	
3	Negative (-) Control	563	577	570	63	61	62	0.11	Negative