Thaw and Culture Details

Cell Line Name	UCSD178i-17-3
WiCell Lot Number	WB61149
Provider	University of California, San Diego – Dr. Kelly Frazer
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	p18 These cells were cultured for 17 passages prior to freeze and post reprogramming. WiCell adds +1 to the passage number to best represent the overall passage number of the cells at thaw.
Date Vialed	13-March-2017
Vial Label	UCSD178i-17-3 p18 WB61149
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	Fail
	Results: *46,XY Nonclonal findings: 47,XY,+12 47,XY,+20* ***Interpretation:*** *This is a normal karyotype. No clonal abnormalities were detected at the stated band level of resolution. There are two nonclonal findings, listed above. Nonclonal findings may result from technical artifact, but may be due to a developing clonal abnormality or to low-level mosaicism. Standard analysis requires that chromosomes are counted in twenty cells. Twenty additional cells were examined with no further evidence of this nonclonal aberration.*			
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.

- Illumina® HumanCoreExome BeadChip Array
- RNA-Seq
- Flow Cytometry (SSEA-4, Tra 1-81)
- Infinium® Expanded Multi-Ethnic Genotyping Array (MEGA^{EX})

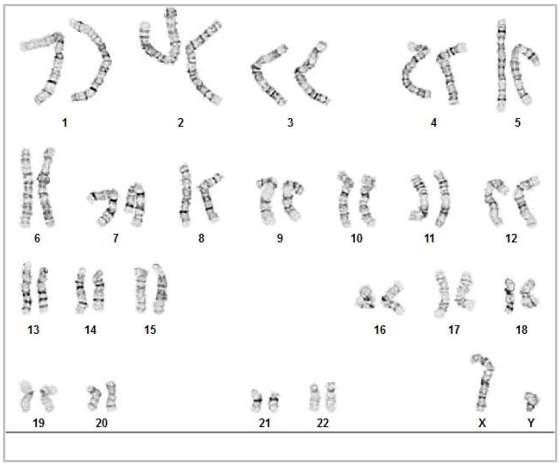
Approval Date	Quality Assurance Approval
17-April-2017	1/2/2018 X JKG JKG Quality Assurance Signed by: Gay, Jenna

Chromosome Analysis Report: 069219

Date Reported: Monday, November 20, 2017
Cell Line: UCSD178i-17-3-WB61149 13063
Passage#: 18
Date of Sample: 11/13/2017
Specimen: Human IPS
Results: 46,XY

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

Nonclonal findings: 47,XY,+12 47,XY,+20



Cell: 7
Slide: G02
Slide Type: Karyotype

Total Counted: 40
Total Analyzed: 8
Total Karyogrammed: 4
Band Resolution: 450 - 550

Interpretation:

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

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

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".

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.

- Illumina® HumanCoreExome BeadChip Array
- RNA-Seq
- Flow Cytometry (SSEA-4, Tra 1-81)
- Infinium® Expanded Multi-Ethnic Genotyping Array (MEGA^{EX})

Approval Date	Quality Assurance Approval
17-April-2017	1/2/2018 X JKG JKG Quality Assurance Signed by: Gay, Jenna

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:
13063-STR
Sample Name on Tube: 13063-STR
165.6 ng/µL, (A260/280=1.89)
Sample Type: Cells
Cell Count: ~2 million cells

Requestor:
WiCell Research Institute
Quality Department

Sample Date: N/A
Receive Date: 11/20/17
Assay Date: 11/28/17
File Name: STR 171129 wmr
Report Date: 11/30/17

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 13063-STR cells submitted by WiCell QA dated and received on 11/20/17, this sample (Label on Tube: 13063-STR) defines the STR profile of the human stem cell line UCSD178i-7-3 comprising 25 allelic polymorphisms across the 15 STR loci analyzed.**

Interpretation: **No STR polymorphisms other than those corresponding to the human UCSD178i-7-3 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 13063-STR sample submitted corresponds to the UCSD178i-7-3 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 12/01/17**

[redacted] *BA*
TRIP Laboratory, Molecular

X *WMR* **Digitally Signed on 12/01/17**

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

Native Product Sterility Report

STERIS

SAMPLE #:	17111201
DATE RECEIVED:	16-Nov-17
TEST INITIATED:	20-Nov-17
TEST COMPLETED:	04-Dec-17

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

SAMPLE NAME / DESCRIPTION:

iPS(Foreskin)-1-WB66667 13067
UCSD234i-SAD2-3-WB66668 13068
UCSD193i-106-1-WB57372 13069
UCSD178i-17-3-WB61149 13071
UCSD165i-97-1-WB64665 13072
WISC013i-SCID-DB66578 13073
WISC012i-SCA-DB55679 13074
UCSD067i-19-1-WB64878 13075
UCSD166i-98-1-WB59911 13076
UCSD210i-112-1-WB63447 13077
UCSD208i-111-1-WB58973 13079
UCSD160i-92-1-WB61150 13080
UCSD189i-28-1-WB60070 13081
UCSD190i-28-2-WB58714 13082
UCSD191i-13-1-WB65029 13083
UCSD196i-30-1-WB57099 13084
UCSD197i-30-2-WB54408 13085
UCSD202i-108-1-WB57850 13086
UCSD215i-113-1-WB59923 13087
STAN054i-149-2-WB66669 13088

UNIQUE IDENTIFIER: NA

PRODUCT REGISTRATION: Human iPS Cells

TEST RESULTS:

# Tested	# Positives (Growth)	- Control
20	2	2 Negative

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

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

Native Product Sterility Report

STERIS

METHOD VALIDATION / PD #: 000053

TEST METHODOLOGY: USP - Direct Transfer

COMMENTS: Sample labeled UCSD208i-111-1-WB58973 13079 was positive in TSB and FTG. Sample #17111201

REVIEWED BY Dlmad DATE 06DEC17

Mycoplasma Detection Assay Report

Testing Performed by WiCell

Lot Release Testing

November 15th, 2017

FORM SOP-QU-004.01
Version G Edition 02
Reported by: SM
Reviewed by: JB
Berthold Flash n' Glo 539

#	Sample Name	Reading A		A Ave	Reading B		B Ave	Ratio B/A	Result	Comments/Suggestions
		RLU1	RLU2		RLU1	RLU2				
1	UCSD178i-17-3-WB61149 13063	86	88	87	35	35	35	0.40	Negative	
2	Positive (+) Control	150	136	143	6886	6897	6892	48.19	Positive	
3	Negative (-) Control	246	231	238.5	25	24	24.5	0.10	Negative