Thaw and Culture Details

Cell Line Name	UCSD111i-2-10
WiCell Lot Number	WB54796
Provider	University of California, San Diego – Dr. Kelly Frazer
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	p31 These cells were cultured for 30 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-December-2016
Vial Label	UCSD111i-2-10 p31 WB54796
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
	Results: 47,XY,+8[16]/46,XY[2] Nonclonal findings: 46,XY,i(20)(q10) 48,XY,+8,+12 ***Interpretation:*** This is an abnormal karyotype. Trisomy 8 is present in sixteen of twenty cells examined. Gain of chromosome 8 is recurrently acquired in cultures of this cell type. No other clonal abnormalities were detected at the stated band level of resolution. There is a pericentric inversion of chromosome 9 in all cells examined. This inversion has been reported as a normal population variant. There are two nonclonal findings, listed above, which contain a chromosomal aberration (trisomy 8 with trisomy 12 and i(20)(q10)) recurrently acquired in cultures of this cell type. Nonclonal findings may result from technical artifact, but may be due to a developing clonal abnormality or to low-level mosaicism.			
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})

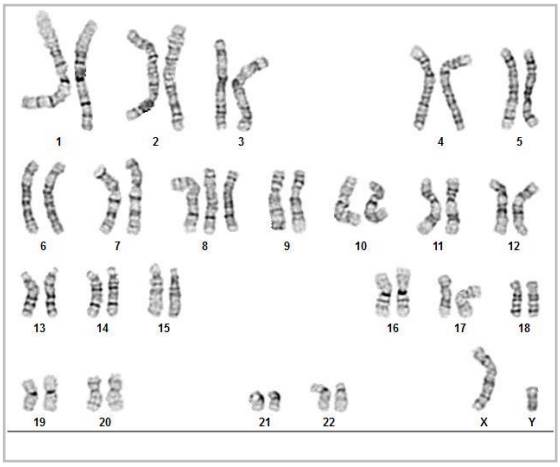
Approval Date	Quality Assurance Approval
04-January-2017	7/25/2018 X JKG JKG Quality Assurance Signed by: Gay, Jenna

Chromosome Analysis Report: 072298

Date Reported: Friday, July 6, 2018
Cell Line: UCSD111i-2-10-WB54796 13838
Passage#: 31
Date of Sample: 6/28/2018
Specimen: Human IPS
Results: 47,XY,+8[16]/46,XY[2]

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

Nonclonal findings: 46,XY,i(20)(q10) 48,XY,+8,+12



Cell: 99
Slide: G01
Slide Type: Karyotype

Total Counted: 20
Total Analyzed: 8
Total Karyogrammed: 4
Band Resolution: 350 - 500

Interpretation:

This is an abnormal karyotype. Trisomy 8 is present in sixteen of twenty cells examined. Gain of chromosome 8 is recurrently acquired in cultures of this cell type. No other clonal abnormalities were detected at the stated band level of resolution. There is a pericentric inversion of chromosome 9 in all cells examined. This inversion has been reported as a normal population variant.

There are two nonclonal findings, listed above, which contain a chromosomal aberration (trisomy 8 with trisomy 12 and i(20)(q10)) recurrently acquired in cultures of this cell type. Nonclonal findings may 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".

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:
13838-STR
Sample Name on Tube: 13838-STR
54.6 ng/µL, (A260/280=1.75)
Sample Type: Cells
Cell Count: ~2 million cells

Requestor:
WiCell Research Institute
Quality Department

Sample Date: N/A
Receive Date: 07/09/18
Assay Date: 07/11/18
File Name: STR 180712 wmr
Report Date: 07/18/18

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 13838-STR cells submitted by WiCell QA dated and received on 07/09/18, this sample (Label on Tube: 13838-STR) defines the STR profile of the human stem cell line UCSD111i-2-10 comprising 28 allelic polymorphisms across the 15 STR loci analyzed.**

Interpretation: **No STR polymorphisms other than those corresponding to the human UCSD111i-2-10 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 13838-STR sample submitted corresponds to the UCSD111i-2-10 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 07/19/18**

[redacted], *BA*
TRIP Laboratory, Molecular

X *WMR* **Digitally Signed on 07/19/18**

[redacted], *PhD, Director / Co-Director*
UWHC Molecular 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*
TRIP agrees to maintain the confidentiality of any information provided to it in connection with its performance of this STR analysis on the same conditions as set forth in paragraph 2 of WiCell's Terms and Conditions of Service (http://www.wicell.org/media.acux/1a429b84-2b54-44a4-8ad8-5c05db93dd8a).

Native Product Sterility Report

STERIS

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

SAMPLE #: 17100438
DATE RECEIVED: 05-Oct-17
TEST INITIATED: 09-Oct-17
TEST COMPLETED: 23-Oct-17

SAMPLE NAME / DESCRIPTION:
JFWT2-WB66611 12952
JFNY3-WB66644 12953
WC010i-CMT2A-1.1-WB66612 12954
WC011i-CMT2A-1.2-WB66645 12955
UCSD104i-2-3-WB54170 12957
UCSD105i-2-4-WB54134 12958
UCSD109i-2-8-WB60929 12959
UCSD110i-2-9-WB57062 12960
UCSD111i-2-10-WB54796 12961
UCSD103i-2-2-WB57649 12963

UNIQUE IDENTIFIER: NA

PRODUCT REGISTRATION: Other: 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: NA

REVIEWED BY Dersard DATE 24OCT17

Mycoplasma Detection Assay Report

Testing Performed by WiCell

Lot Release Testing

June 28, 2018

FORM SOP-QU-004.01
Version G Edition 02
Reported by: AP
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	UCSD111i-2-10-WB54796 13838	237	237	237	83	79	81	0.34	Negative	
2	Positive (+) Control	333	337	335	45221	45526	45374	135.44	Positive	
3	Negative (-) Control	667	700	683.5	75	74	74.5	0.11	Negative