

Thaw and Culture Details

Cell Line Name	UCSD081i-1-14					
WiCell Lot Number	WB61903					
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	p19 These cells were cultured for 18 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	30-March-2017					
Vial Label	UCSD081i-1-14 p19 WB61903					
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,XX,t(4;10)(q31.3;q22.1)[20]							
	Interpretation: This is an abnormal karyotype. There is an apparently balanced translocation							
			0 in twenty of twenty cells examined					
	abnormalities were found. may help to determine the		ryotype with the karyotype of the so e of this abnormality.	ource specimen				
Post-Thaw Viable Cell WiCell		SOP-CH-305	 ≥ 15 Undifferentiated Colonies, ≤ 30% Differentiation and recoverable attachment after 	Pass				
			passage					
	UW Translational	PowerPlex 16 HS						
Identity by STR	Research Initiatives in	System by	Defines profile	Pass				
	Pathology Laboratory	Promega						
Sterility	Steris	ST/07	Negative	Pass				
Mycoplasma	WiCell	SOP-QU-004	Negative	Pass				

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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.



Testing Reported by Provider

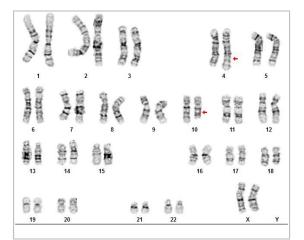
The Provider stated that some or all of the additional analyses listed below may have been performed for this cell line. For more information, publication and dbGaP links, where available, are provided on the cell line specific web page on the WiCell website.

- Illumina[®] HumanCoreExome BeadChip Array
- RNA-Seq
- Flow Cytometry (SSEA-4, Tra 1-81)
- Infinium® Expanded Multi-Ethnic Genotyping Array (MEGAEX)

Approval Date	Quality Assurance Approval
26-April-2017	10/29/2017 XG VIG Viging Assurance Signed by: Gay, Janna



Date Reported: Tuesday, September 26, 2017 Cell Line: UCSD081i-1-14-WB61903 12864 Passage#: 19 Date of Sample: 9/14/2017 Specimen: Human IPS Results: 46,XX,t(4;10)(q31.3;q22.1)[20]



Cell Line Gender: Female Reason for Testing: lot release testing Investigator: , WiCell CDM Cell: 48 Slide: G02 Slide Type: Karyotype Total Counted: 20 Total Analyzed: 8 Total Karyogrammed: 4

Band Resolution: 425 - 475

Interpretation:

This is an abnormal karyotype. There is an apparently balanced translocation between the long arms of chromosomes 4 and 10 in twenty of twenty cells examined. No other clonal abnormalities were found.

Comparison of this karyotype with the karyotype of the source specimen may help to determine the origin and significance of this abnormality.

Completed by: Reviewed and Interpreted by: A signed copy of this report is ava		G(ASCP) , PhD, FACMG nuest.	
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 results 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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Short Tandem Repeat Analysis

Department of Pathology and Laboratory Medicine TRIP Laboratory (Molecular) http://www.pathology.wisc.edu/research/trip

Sample Report: 12864-STR Sample Name on Tube: 12864-STR 70.4 ng/μL, (A260/280=1.85) Sample Type: Cells Cell Count: ~2 million cells

Requestor: WiCell Research Institute Quality Department WiCell[®] info@wicell.org (888) 204-1782

Sample Date: N/A Receive Date: 09/18/17 Assay Date: 09/19/17 File Name: 170920 STR WMR Report Date: 09/21/17

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
TPOX	6-13	information has
D8S1179	7-18	been redacted to
vWA	10-22	protect donor
Amelogenin	X,Y	confidentiality. If
Penta_D	2.2, 3.2, 5, 7-17	more information
CSF1PO	6-15	is required, please, contact
D16S539	5, 8-15	WiCell's Technical
D7S820	6-14	Support.
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 12864-STR cells submitted by WiCell QA dated and received on 09/18/17, this sample (Label on Tube: 12864-STR) defines the STR profile of the human stem cell line UCSD081i-1-14 comprising 26 allelic polymorphisms across the 15 STR loci analyzed.

<u>Interpretation:</u> No STR polymorphisms other than those corresponding to the human UCSD081i-1-14 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 12864-STR sample submitted corresponds to the UCSD081i-1-14 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 09/21/17	X WMR	Digitally Signed on	09/21/17
		PhD, Director / Co-Directo	or

TRIP Laboratory, Molecular

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



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 September 14, 2017 FORM SOP-QU-004.01 Version F Edition 02 Reported by: KR Reviewed by: JB BD Monolight 180

		Read	ing A	Α	Read	ling B	В	Ratio		
#	Sample Name	RLU1	RLU2	Ave	RLU1	RLU2	Ave	B/A	Result	Comments/Suggestions
1	UCSD081i-1-14-WB61903 12864	242	258	250	91	103	97	0.39	Negative	
2	Positive (+) Control	407	430	418.5	37240	37764	37502	89.61	Positive	
3	Negative (-) Control	713	753	733	81	84	82.5	0.11	Negative	

