

Thaw and Culture Details

Cell Line Name	UCSD181i-3-1						
WiCell Lot Number	WB59924						
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	p22 These cells were cultured for 21 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	20-February-2017						
Vial Label	UCSD181i-3-1 p22 WB59924						
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 Provider Test Method		Result			
	WiCell	SOP-CH-003	Expected karyotype	See Report			
Karyotype by G-banding	Results: 46,XX,dup(20)(q11.2q11.2)[5]/46,XX[15] Interpretation: This is an abnormal karyotype. There is an interstitial duplication in the long arm of chromosome 20 in five of twenty cells examined. There is a known recurrent acquired duplication at this location in human pluripotent stem cell cultures; we recommend that this abnormality be confirmed by higher resolution testing. No other clonal abnormalities were detected at the stated band level of resolution						
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			

©2017 WiCell Research Institute



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			
23-March-2017	7/24/2018 XG XG Quality Assurance Signed by Gay, Anna			

©2017 WiCell Research Institute



Date Reported: Tuesday, July 03, 2018 Cell Line Sex: Female Cell Line: UCSD181i-3-1-WB59924 13824 Reason for Testing: lot release testing Passage#: 22 Date of Sample: 6/28/2018 Investigator: , WiCell Specimen: Human IPS Results: 46,XX,dup(20)(q11.2q11.2)[5]/46,XX[15] \$112 **Cell: 74** Slide: G01 Slide Type: Karyotype Total Counted: 20 Total Analyzed: 9 Total Karyogrammed: 5 Band Resolution: 425 - 475 18

Interpretation:

This is an abnormal karyotype. There is an interstitial duplication in the long arm of chromosome 20 in five of twenty cells examined. There is a known recurrent acquired duplication at this location in human pluripotent stem cell cultures; we recommend that this abnormality be confirmed by higher resolution testing. No other clonal abnormalities were detected at the stated band level of resolution

Completed by: CG(ASCP) Reviewed and Interpreted by: 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 of this assay are for research use only. Unless otherwise mutually agreed in writing, the services provided to you hereunder by WiCell Research Institute, Inc. ("WiCell") are governed solely by WiCell's Terms and Conditions of Service, found at www.wicell.org/privacyandterms. Any terms you may attach to a purchase order or other document that are inconsistent, add to, or conflict with WiCell's Terms and Conditions of Service are null and void and of no legal force or effect.



HISTOLOGY - IHC - MOLECULAR - IMAGING

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

Sample Report: 13824-STR Sample Name on Tube: 13824-STR 103.6 ng/µL, (A260/280=1.95) 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:** 07/02/18 Assay Date: 07/09/18 File Name: STR 1820710 wmr **Report Date:** 07/12/18

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
ТРОХ	6-13	been redacted to
D8S1179	7-18	protect donor
vWA	10-22	confidentiality. If
Amelogenin	Х,Ү	more information
Penta D	2.2, 3.2, 5, 7-17	is required,
CSF1PO	6-15	please, contact WiCell's Technical
D16S539	5, 8-15	Support.
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 13824-STR cells submitted by WiCell QA dated and received on 07/02/18, this sample (Label on Tube: 13824-STR) defines the STR profile of the human stem cell line UCSD181i-3-1 comprising 26 allelic polymorphisms across the 15 STR loci analyzed.

Interpretation: No STR polymorphisms other than those corresponding to the human UCSD181i-3-1 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 13824-STR sample submitted corresponds to the UCSD181i-3-1 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 07/13/18	X WMR Digita	ally Signed on 07/13/18
, BA TRIP Laboratory Molecular		Director / Co-Director tics Laboratory / UWSMPH TRIP Labora

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).

Short Tandem Repeat

Analysis

Native Product Sterility Report



		SAMPLE #:	17101392
WiCell		DATE RECEIVED:	19-Oct-17
504 S Rosa Rd, Rm 101		TEST INITIATED:	20-Oct-17
Madison, WI 53719		TEST COMPLETED:	03-Nov-17
SAMPLE NAME / DESCRIPTION:	UCSD061i-65-1-WB60393 12989		
	MCW075i-U2096-WB66541 12990		
	STAN054i-149-2-DB30942 12991		
	UCSD076i-1-7-WB61578 12992		
	UCSD078i-1-9-WB60041 12993		
	UCSD020i-3-8-WB63471 12994		
	UCSD021i-3-9-WB63625 12995		
	UCSD181i-3-1-WB59924 12996		
	UCSD182i-3-2-WB60071 12997		
	UCSD038i-24-2-WB57681 12998		
UNIQUE IDENTIFIER:	NA		
PRODUCT REGISTRATION:	Human iPS cells		
TEST RESULTS:	# Positives		

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: METHOD VALIDATION / PD #: TEST METHODOLOGY:

Processed according to LAB-003: Sterility Test Procedure 000053 USP - Direct Transfer

COMMENTS: NA soll **REVIEWED BY** 0

DATE 03NOU17

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 June 28, 2018 FORM SOP-QU-004.01 Version G Edition 02 Reported by: AP 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	UCSD181i-3-1-WB59924 13824	228	226	227	88	91	89.5	0.39	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	

