

Certificate of Analysis

Thaw and Culture Details

Cell Line Name	STAN006i-148-1		
WiCell Lot Number	DB31124		
Provider/Client	Stanford University – Laboratory of Dr.	Marlene Rabinovitch	
Banked By	Stanford University – Laboratory of Dr.	Marlene Rabinovitch	
Thaw and Culture Recommendations	WiCell recommends thawing 1 vial into E8 [™] and Matrigel [®] .	1 well of a 6 well plate using TeSR [™] -	
Protocol	WiCell Feeder Independent Pluripotent	Stem Cell Protocol	
Culture Platform Prior to Freeze	Medium: E8	Matrix: Matrigel [®]	
Passage Number	p10 Cells were cultured for 10 passages prior to freeze and post reprogramming. Plated cells at thaw should be labeled passage 11.		
Date Vialed	10-JUNE-2015		
Vial Label	06/10/2015 E 148 D####-### ip 148FSVNOC1 P10 V##############	The label on vial only includes information applicable to the entire lot. " D####-###" and "V########## are vial specific and therefore are not included on this CoA.	
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.		

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.

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Results

Test Description	Test Provider	Test Method Test Specification		Result	
	WiCell	G-T-L Banding performed on 20 metaphase cells	Expected karyotype	See Report	
Karyotype	<i>Results:</i> 46,XX <i>Interpretation:</i> T resolution.	his is a normal karyotype; no clonal abnorm	a normal karyotype; no clonal abnormalities were detected at the stated band level of		
Post-Thaw Viable Cell Recovery	WiCell	Thaw using specified Thaw & Culture Recommendations	Recoverable attachment after passage	Pass	
Identity by STR	WiCell	PowerPlex 16 HS System by Promega [™]	Defines STR profile of deposited cell line	See Report	
Mycoplasma	WiCell	PCR	Amplification of mycoplasma specific DNA detected with negative result	Pass	
Sterility	Steris	Native Product Direct Transfer using FTM and TSB (ST/07)	Negative for growth following 14 days of culture	Pass	

Testing Reported by Provider

Test Description	Test Method	Result
Identity	SNP	iPSCs match the donor material
Mycoplasma	Lonza MycoAlert™ kit	Negative

The Provider stated that the additional analysis 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.

- Infinium[®] Expanded Multi-Ethnic Genotyping Array (MEGA^{EX})

Approval Date	WiCell Quality Assurance Approval	
22-June-2022	6/22/2022 A A WiCell Quality Assurance Signed by: Amtz. Andy	

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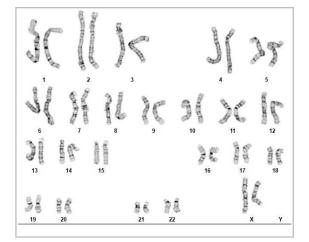
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Chromosome Analysis Report: 091784

Date Reported: Thursday, May 5, 2022 Cell Line: STAN006i-148-1-DB31124 Submitted Passage #: 12 Date of Sample: 4/28/2022 Specimen: Human IPSC Results: 46,XX Cell Line Sex: Female Reason for Testing: LOT_RELEASE

Investigator: WiCell Stem Cell Bank, WiCell



Cell: 8 Slide: G03 Slide Type: Karyotype Total Counted: 20 Total Analyzed: 8 Total Karyogrammed: 4 Band Resolution: 375 - 450

Interpretation:

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

Completed by: Reviewed and Interpreted by: Jennifer Pecos, CG(ASCP) Vanessa Horner, PhD, FACMG

For internal	use	only
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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 or effect.



Short Tandem Repeat

Requestor: WiCell Stem Cell Bank, WiCell Samples Received: 27Apr22, 28Apr22 STR Amplification Date: 04May22 Form SOP-89.01 Version 8.0

Sample Name	UCSD241i- APP2-3- WB67856 p21	STAN006i-148- 1-DB31124 p12	JHU217i- DB36868 p8	JHU225i- DB41417 p6			
Label on tube	91769	91784	91794	91795			
FGA							
ТРОХ							
D8S1179							
vWA							
Amelogenin		Identifying					
Penta_D		information been reda					
CSF1PO		protect do confidentia					
D16S539		more infor	mation				
D7S820		is required,					
D13S317	please contact info@wicell.org						
D5S818							
Penta_E							
D18S51							
D21S11							
TH01							
D3S1358							
Allelic Polymorphisms	28	28	27	29			
Matches*	See Matches Comments			77637			
Comments							

*Note: The STR profile of the following sample is an exact match for the given sample/samples.



Short Tandem Repeat

Form SOP-89.01 Version 8.0

Requestor: WiCell Stem Cell Bank, WiCell Samples Received: 27Apr22, 28Apr22 STR Amplification Date: 04May22

<u>Assay Description</u>: STR analysis is performed using the PowerPlex 16 HS System by Promega[™]. Results are reported as 13 CODIS STR markers, Amelogenin for gender determination and two low-stutter, highly discriminating pentanucleotide STR markers.

<u>Results:</u> The genotypic profiles comprise a range of 27-29 allelic polymorphisms across the 15 STR loci analyzed.

Interpretation: 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. These results suggests that the cells submitted correspond to the cell lines as named and were not contaminated with any other human 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 cell lines is ~2-5%.

Matches: Sample 91769 is an exact match to 67074, 67101, 68023, 75167, 87113, 89245, 90431 and 90998.

5/6/2022	5/6/2022	5/9/2022
X Amber Kuhn	X Molly Miles	${\sf X}$ Dawn Graham
Tech #1 Characterization Signed by: Kuhn, Amber	Tech #2 Characterization Signed by: Miles, Molly	QA Review Quality Assurance Signed by: Graham, Dawn

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Raw data is available upon request.



Mycoplasma Assay Report

PCR-based assay performed by WiCell WiCell Stem Cell Bank, WiCell 30Apr22

Sample Name	Result	Interpretation
UCSD241i-APP2-3-WB67856 p21 (91769)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
STAN006i-148-1-DB31124 p12 (91784)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
Positive (+) Control	Positive	
Negative (-) Control	Negative	

Assay Description Sample is tested for presence of mycoplasma using EZ-PCR[™] Mycoplasma Detection Kit (Sartorius).

4/30/2022	4/30/2022	5/2/2022
${\sf X}$ Kayla Janke	X Molly Miles	X Dawn Graham
Tech #1 Characterization Signed by: Janke, Kayla	Tech #2 Characterization Signed by: Miles, Molly	QA Review Quality Assurance Signed by: Graham, Dawn

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A gel image is available upon request.

Native Product Sterility Report



		SAMPLE #:	21090924
WiCell		DATE RECEIVED:	16-Sep-21
504 S Rosa Road, Rm 101		TEST INITIATED:	20-Sep-21
Madison, WI 53719		TEST COMPLETED:	04-Oct-21
SAMPLE NAME / DESCRIPTION:			
	CREM034i-SA5-1-DB48076		
	CREM035i-SA36-1-DB47969		
	CREM036i-SA40-1-DB48079		
	CREM038i-SA64-1-DB48096		
	CREM041i-SA208-2-DB48099		
	CREM045i-SA106-1-DB48112		
	STAN006i-148-1-DB31124		
	STAN007i-148-2-DB31132		
	STAN021i-170-1-DB30879		
UNIQUE IDENTIFIER:	N/A		

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: PD #: TEST METHODOLO	GY:	Processed accord 000053 USP - Direct Tran	-	erility Test Procedu	Ire
COMMENTS:	NA				

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. Results applied to samples as received.

REVIEWED BY

DATE OBOCT TONI