



Certificate of Analysis

Thaw and Culture Details

Cell Line Name	STAN021i-170-1	
WiCell Lot Number	WB67948	
Parent Material	STAN021i-170-1-DB30879	
Provider/Client	Stanford University – Laboratory of Dr. Marlene Rabinovitch	
Banked By	WiCell	
Thaw and Culture Recommendations	WiCell recommends thawing 1 vial into 3 wells of a 6 well plate using TeSR™ - E8™ and Matrigel®.	
Protocol	WiCell Feeder Independent Pluripotent Stem Cell Protocol	
Culture Platform Prior to Freeze	Medium: TeSR™ -E8™	Matrix: Matrigel®
Passage Number	p14 Cells were cultured for 13 passages prior to freeze and post reprogramming. Plated cells at thaw should be labeled passage 14.	
Date Vialied	01-AUGUST-2022	
Vial Label	STAN021i-170-1 p14 WB67948	
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.	



Certificate of Analysis

Results

Test Description	Test Provider	Test Method	Test Specification	Result
Karyotype	WiCell	G-T-L Banding performed on 20 metaphase cells	Expected karyotype	See Report
	Results: 46,XY Interpretation: This is a normal karyotype; no clonal abnormalities were detected at the stated band level of resolution.			
Post-Thaw Viable Cell Recovery	WiCell	Thaw using specified Thaw & Culture Recommendations	≥ 15 Undifferentiated Colonies prior to passage, ≤ 30% Differentiation prior to passage, and 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

Approval Date	WiCell Quality Assurance Approval
29-September-2022	<p style="text-align: right;">7/19/2022</p> <p>X Ryen Smith HEB WiCell Quality Assurance Signed by Smith, Ryen</p>

Date Reported: Tuesday, August 30, 2022

Cell Line: STAN021i-170-1-WB67948

Submitted Passage #: 14

Date of Sample: 8/18/2022

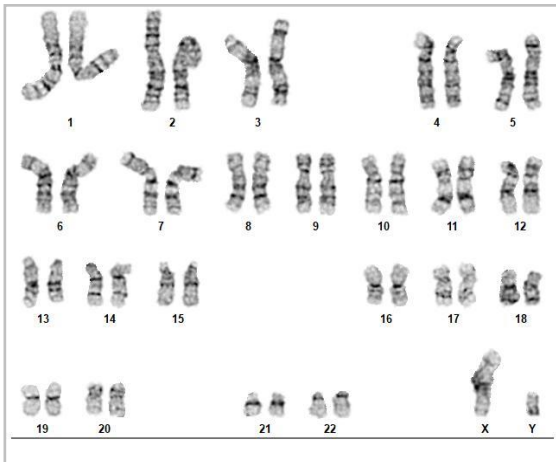
Specimen: Human iPSC

Results: 46,XY

Cell Line Sex: Male

Reason for Testing: LOT_RELEASE

Investigator: WiCell Stem Cell Bank, WiCell



Cell: 89

Slide: G03

Slide Type: Karyotype

Total Counted: 20

Total Analyzed: 8

Total Karyogrammed: 5

Band Resolution: 400 - 425

Interpretation:

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

Completed by: Timm Gonzales, CG(ASCP)

Reviewed and Interpreted by: Xiangqiang Shao, PhD

For internal use only

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.



Short Tandem Repeat

Requestor: WiCell Stem Cell Bank, WiCell

Samples Received: 22Aug22, 18Aug22

STR Amplification Date: 24Aug22

Form SOP-89.01

Version 9.0

Sample Name	PENN014i-37-3-DB36309 p15	STAN021i-170-1-WB67948 p14
WiCell CTR No. ¹	93460	93446
FGA	Identifying information has been redacted to protect donor confidentiality. If more information is required, please contact info@wicell.org	
TPOX		
D8S1179		
vWA		
Amelogenin		
Penta_D		
CSF1PO		
D16S539		
D7S820		
D13S317		
D5S818		
Penta_E		
D18S51		
D21S11		
TH01		
D3S1358		
Allelic Polymorphisms	28	28
Matches*		91700
Comments		

**Note: The STR profile of the following sample is a 100% match for the given sample/samples unless otherwise specified.*

¹ CTR No.: Characterization Test Request Number; also known as a laboratory accessioning number.



Short Tandem Repeat

Form SOP-89.01
Version 9.0

Requestor: WiCell Stem Cell Bank, WiCell
Samples Received: 22Aug22, 18Aug22
STR Amplification Date: 24Aug22

Assay Description: 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.

Results: The genotypic profiles comprise a range of 28 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 ~2-4%.

8/27/2022	8/31/2022	9/1/2022
X Molly Miles	X Anna Lisa Larson	X Dawn Graham
Tech #1 Characterization Signed by: Miles, Molly	Tech #2 Characterization Signed by: Larson, Anna Lisa	QA Review Quality Assurance Signed by: Graham, Dawn

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Mycoplasma Assay Report

PCR-based assay performed by WiCell
WiCell Stem Cell Bank, WiCell
20Aug22

Form SOP-83.01
Version 5.0

Sample Name	Result	Interpretation
STAN021i-170-1-WB67948 p14 (93446)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
WC007i-FX13-2-WB67949 p25 (93387)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
PENN062i-278-2-WB67947 p25 (93374)	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).

8/21/2022	8/22/2022	8/22/2022
X Molly Miles <hr/> Tech #1 Characterization Signed by: Miles, Molly	X Justin Hobson <hr/> Tech #2 Characterization Signed by: Hobson, Justin	X Dawn Graham <hr/> QA Review Quality Assurance Signed by: Graham, Dawn

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A gel image is available upon request.

Native Product Sterility Report



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

SAMPLE #: 22081490
DATE RECEIVED: 25-Aug-22
TEST INITIATED: 30-Aug-22
TEST COMPLETED: 13-Sep-22

SAMPLE NAME / DESCRIPTION: PENN062i-278-2-WB67947
STAN021i-170-1-WB67948
WC007i-FX13-2-WB67949
JHU097i-WB67950
JHU253i-WB67951
STAN275i-732C1-WB67952
PENNO53i-292-3-DB36137
PENN126i-120-1-DB36589
PENN127i-415-1-DB34745
PENN128i-8-4-DB36133

UNIQUE IDENTIFIER: NA

TEST RESULTS:

# Tested	# Positives (Growth)	- Control
10	0	3 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

PD #: 000053

TEST METHODOLOGY: USP - Direct Transfer

COMMENTS: NA

REVIEWED BY _____

DATE 16 Sep 2022

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.