



Certificate of Analysis

Thaw and Culture Details

Cell Line Name	PENN035i-746-3	
WiCell Lot Number	DB36398	
Provider/Client	University of Pennsylvania – Dr. Daniel Rader	
Banked By	Penn Institute for Regenerative Medicine iPS Core Facility	
Thaw and Culture Recommendations	WiCell recommends thawing 1 vial into 1 well of a 6 well plate using Stem Cell Culture Medium and MEF. WiCell recommends passaging with ROCK Inhibitor	
Protocol	WiCell Feeder Based (MEF) Pluripotent Stem Cell Protocol	
Culture Platform Prior to Freeze	Medium: Stem Cell Culture Medium	Matrix: MEF
Passage Number	p13 Cells were cultured for 13 passages prior to freeze and post colony selection. Plated cells at thaw should be labeled passage 14.	
Date Vialied	27-MAY-2015	
Vial Label	iPS-746 Sev3 P13 05-27-15 JS	
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,XX 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	Recoverable attachment after passage	Pass
Identity by STR	WiCell	PowerPlex 16 HS System by Promega™	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

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.

- Flow Cytometry (Tra1-60 and SSEA-4)
- Differentiation into hepatocytes
- Infinium® Expanded Multi-Ethnic Genotyping Array (MEGA^{EX})

Approval Date	WiCell Quality Assurance Approval
29-September-2022	 9/29/2022 X HEB HEB WiCell Quality Assurance Signed by: Bruner, Haley

Date Reported: Tuesday, September 20, 2022

Cell Line Sex: Female

Cell Line: PENN035i-746-3-DB36398

Reason for Testing: LOT_RELEASE

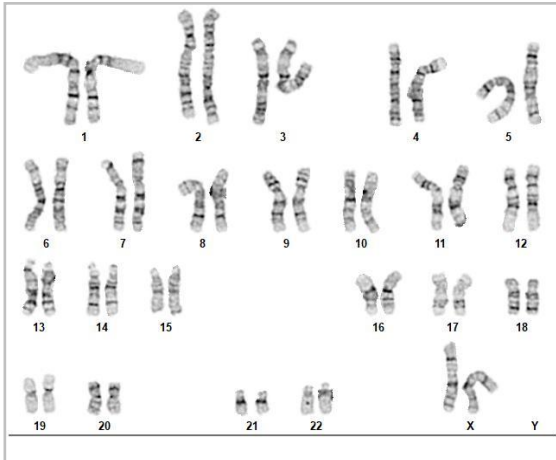
Submitted Passage #: 17

Date of Sample: 9/7/2022

Investigator: WiCell Stem Cell Bank, WiCell

Specimen: Human iPSC

Results: 46,XX



Cell: 12

Slide: G03

Slide Type: Karyotype

Total Counted: 20

Total Analyzed: 8

Total Karyogrammed: 4

Band Resolution: 425 - 550

Interpretation:

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

Completed by: Dawn Davis, CG(ASCP)

Reviewed and Interpreted by: Vanessa Horner, PhD, FACMG

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

Form SOP-89.01
Version 9.0

Requestor: WiCell Stem Cell Bank, WiCell
Samples Received: 07Sep22, 08Sep22, 12Sep22, 13Sep22
STR Amplification Date: 17Sep22

Sample Name	H1.CD43/CD144 DR-WB67964 p42	STAN358i- 298C3- WB67955 p16	STAN311i- 906C1- WB67956 p18	STAN175i- 373C4- WB67963 p19	JHU253i- WB67951 p6	JHU097i- WB67950 p7	PENN035i-746- 3-DB36398 p17
WiCell CTR No. ¹	93806	93785	93784	93783	93782	93760	93717
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							
Matches*	See Matches Comments	77573, 78410	80669, 81039	75198, 75279	76579	77720	
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: 07Sep22, 08Sep22, 12Sep22, 13Sep22
STR Amplification Date: 17Sep22

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 26-29 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 ~2-4%.

Matches: 93806 matches 100% to 86570, 86550, 82881, 82204, 82128, 82047, 80875, 80711, 77345, 75817, and other profiles. Additional matches provided upon request.

9/20/2022	9/21/2022	9/20/2022
<p>X Molly Miles</p> <hr/> <p>Tech #1 Characterization Signed by: Miles, Molly</p>	<p>X Anna Lisa Larson</p> <hr/> <p>Tech #2 Characterization Signed by: Larson, Anna Lisa</p>	<p>X Hunter Hefti</p> <hr/> <p>QA Review Quality Assurance Signed by: Hefti, Hunter</p>

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Mycoplasma Assay Report

PCR-based assay performed by WiCell
WiCell Stem Cell Bank, WiCell
13Sep22

Form SOP-83.01
Version 5.0

Sample Name	Result	Interpretation
PENN035i-746-3-DB36398 p17 (93717)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
JHU097i-WB67950 p7 (93760)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
JHU253i-WB67951 p6 (93782)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
STAN175i-373C4-WB67963 p19 (93783)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
STAN311i-906C1-WB67956 p19 (93784)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
STAN358i-298C3-WB67955 p17 (93785)	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).

9/13/2022	9/14/2022	9/15/2022
X Molly Miles <hr/> Tech #1 Characterization Signed by: Miles, Molly	X Justin Hobson <hr/> Tech #2 Characterization Signed by: Hobson, Justin	X Hunter Hefti <hr/> QA Review Quality Assurance Signed by: Hefti, Hunter

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A gel image is available upon request.

Native Product Sterility Report



CORRECTED REPORT

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

SAMPLE #: 21090501
DATE RECEIVED: 09-Sep-21
TEST INITIATED: 13-Sep-21
TEST COMPLETED: 27-Sep-21

SAMPLE NAME / DESCRIPTION: PENN035i-746-3-DB36398
PENN043i-633-3-DB35058
PENN044i-51-1-DB36547
PENN100i-623-3-DB36129
NDO.SS.001-WB67729
NDO.SS.002-WB67730
NDO.SS.003-WB67728
NDO.SS.004-WB67727
NDO.SS.008-WB67731
NDO.SS.009-WB67734
NDO.SS.011-WB67733
NDO.SS.012-WB67732
KOLF2.1-WB67751
NDO.SS.010-WB67752
NDO.SS.013-WB67744
NDO.SS.014-WB67750
NDO.SS.017-WB67745
NDO.SS.018-WB67756
CREM033i-SS49-1-DB48073
STAN013i-121-1-DB31143

UNIQUE IDENTIFIER: N/A

TEST RESULTS:

# Tested	# Positives (Growth)	- Control
20	0	2 Negatives

TEST SUMMARY:

# Samples	Media Type	Volume (mL)	Incubation Temperature (° C)	Incubation Duration (Days)
20	TSB	40	20-25	14
20	FTG	40	30-35	14

REFERENCE:

Processed according to LAB-003: Sterility Test Procedure

PD #:

000053

TEST METHODOLOGY:

USP - Direct Transfer

Native Product Sterility Report



COMMENTS: Report revised to correct Sample Name/Description

REVIEWED BY

A handwritten signature in blue ink, appearing to be "G. M. H.", written over a horizontal line.

DATE

29 NOV 2021

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.