



Thaw and Culture Details

Cell Line Name	PENN022i-89-1
WiCell Lot Number	WB67590
Parent Material	PENN022i-89-1-DB36532
Provider	University of Pennsylvania – Dr. Daniel Rader
Banked By	WiCell
Thaw and Culture Recommendations	WiCell recommends thawing 1 vial into 3 wells of a 6 well plate using mTeSR™1 and Matrigel®.
Protocol	WiCell Feeder Independent Pluripotent Stem Cell Protocol
Culture Platform Prior to Freeze	Feeder Independent
	Medium: mTeSR™1
	Matrix: Matrigel®
Passage Number	p20 These cells were cultured for 19 passages prior to freeze and post colony selection. WiCell adds +1 to the passage number at freeze to best represent the overall passage number of the cells at thaw. Plated cells at thaw should be labeled passage 20.
Date Vial	23-October-2020
Vial Label	PENN022i-89-1 p20 WB67590
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-49	Expected karyotype	See Report
Post-Thaw Viable Cell Recovery	WiCell	SOP-99	≥ 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	Pass
Sterility	Steris	ST/07	Negative	Pass
Mycoplasma	WiCell	SOP-79	Negative	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	Quality Assurance Approval
17-December-2020	<p style="text-align: right;">7/14/2023</p> <p>X Ryen Smith JRG Quality Assurance Signed by: Smith, Ryen</p>

Date Reported: Monday, November 23, 2020

Cell Line: PENN022i-89-1-WB67590

Submitted Passage #: 20

Date of Sample: 11/12/2020

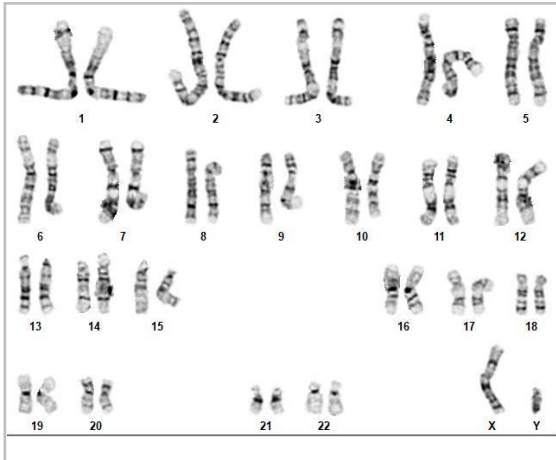
Specimen: Human iPSC

Results: 46,XY

Cell Line Sex: Male

Reason for Testing: LOT_RELEASE

Investigator: WiCell Stem Cell Bank, WiCell



Cell: 9

Slide: G03

Slide Type: Karyotype

Total Counted: 20

Total Analyzed: 8

Total Karyogrammed: 4

Band Resolution: 450 - 550

Interpretation:

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

Completed by: [REDACTED], CG(ASCP)

Reviewed and Interpreted by: [REDACTED], Ph.D.

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: 10Nov20, 12Nov20

STR Amplification Date: 16Nov20

Sample Name	JHU036i-DB40981 p.7	JHU103i-DB36236 p.5	JHU085i-DB36225 p.7	PENN022i-89-1-WB67590 p.20
Label on tube	83722	83807	83808	83809
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	24	27	26	27
Matches*				
Comments				

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



Short Tandem Repeat

Requestor: WiCell Stem Cell Bank, WiCell
Samples Received: 10Nov20, 12Nov20
STR Amplification Date: 16Nov20

Results: The genotypic profiles comprise a range of 24-27 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%.

11/20/2020

11/20/2020

11/20/2020

X [Redacted]

Tech #1
Characterization
Signed by: [Redacted]

X [Redacted]

Tech #2
Characterization
Signed by: [Redacted]

X [Redacted]

QA Review
Quality Assurance
Signed by: [Redacted]

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Raw data is available upon request.

Native Product Sterility Report



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

SAMPLE #: 20110772
DATE RECEIVED: 12-Nov-20
TEST INITIATED: 17-Nov-20
TEST COMPLETED: 01-Dec-20

SAMPLE NAME / DESCRIPTION: PENN022i-89-1-WB67590
WA09-RB67589
JHU036i-DB40981
JHU105i-DB36241
JHU148i-DB36280
JHU173i-DB36380
JHU214i-DB36851
JHU234i-DB37041
STAN207i-459C2-WB67594
JHU085i-DB36225

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: Processed according to LAB-003: Sterility Test Procedure

PD #: 000053

TEST METHODOLOGY: USP - Direct Transfer

COMMENTS: NA

REVIEWED BY  Digitally signed by Sarah Scribner
Date: 2020.12.03 07:19:34 -06'00'

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. Results applied to samples as received.



Mycoplasma Assay Report

PCR-based assay performed by WiCell

WiCell

10Nov20

FORM SOP-83.01

Version 01

Sample Name	Result	Comments/Suggestions
WA09-RB67589 (83593)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
PENN022i-89-1-WB67590 (83710)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
JHU085i-DB36225 (83711)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
JHU103i-DB36236 (83712)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
Positive (+) Control	Positive	
Negative (-) Control	Negative	

Reported by: [REDACTED], Assistant Research Specialist

Reviewed by: [REDACTED], Laboratory Supervisor- Characterization

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A gel image is available upon request.