Thaw and Culture Details

Cell Line Name	PENN001i-87-2
WiCell Lot Number	DB36483
Provider	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. WiCell recommends thawing using ROCK Inhibitor for best results.
Culture Platform	Feeder Dependent
	Medium: hESC Medium (KOSR)
	Matrix: MEF
Protocol	WiCell Feeder Dependent Protocol
Passage Number	p13 These cells were cultured for 13 passages prior to freeze and post colony picking. Therefore, plated cells at thaw should be labeled passage 14.
Date Vialed	20-July-2015
Vial Label	iPS-87-098 SEV2 P13 7/20/2015 ZL
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
Post-Thaw Viable Cell Recovery	WiCell	SOP-CH-305	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	Biotest Laboratories	ST/07	Negative	Pass
Mycoplasma	WiCell	SOP-QU-004	Negative	Pass
Karyotype by G-banding	WiCell	SOP-CH-003	Report karyotype	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.

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

Approval Date	Quality Assurance Approval
23-June-2016	3/5/2018 X RK RK Quality Assurance Signed by: Kremers, Erik

Short Tandem Repeat Analysis

School of Medicine and Public Health
UNIVERSITY OF WISCONSIN-MADISON
Department of Pathology and Laboratory Medicine
TRIP Laboratory (Molecular)
http://www.pathology.wisc.edu/research/trip

WiCell®
info@wicell.org
(888) 204-1782

Sample Report:
11771-STR
Sample Name on Tube: 11771-STR
44.0 ng/µL, (A260/280=1.97)
Sample Type: Cells
Cell Count: ~2 million cells

Requestor:
WiCell Research Institute
Quality Department

Sample Date: N/A
Receive Date: 08/22/16
Assay Date: 08/23/16
File Name: 160825 str jam
Report Date: 08/26/16

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 been redacted to protect donor confidentiality. If more information is required, please, contact WiCell's Technical Support.
TPOX	6-13	
D8S1179	7-18	
vWA	10-22	
Amelogenin	X,Y	
Penta_D	2.2, 3.2, 5, 7-17	
CSF1PO	6-15	
D16S539	5, 8-15	
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 11771-STR cells submitted by WiCell QA dated and received 08/22/16, this sample (Label on Tube: 11771-STR) defines the STR profile of the human stem cell line PENN001i-87-2 comprising 26 allelic polymorphisms across the 15 STR loci analyzed.**

Interpretation: **No STR polymorphisms other than those corresponding to the human PENN001i-87-2 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 11771-STR sample submitted corresponds to the PENN001i-87-2 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%.**

[1]For this sample a microvariant exists at the D21S11 loci with a size between 33 and 33.2.

X *RMB* **Digitally Signed on 08/29/16**

[redacted]
TRIP Laboratory, Molecular

X *WMR* **Digitally Signed on 08/29/16**

[redacted], *PhD, Director / Co-Director*
UWHC Molecular Diagnostics Laboratory / UWSMPH TRIP Laboratory

Sterility Report

Biotest Laboratories, Inc.
Making life-saving products possible

WiCell Research Institute, Inc.
WiCell Quality Assurance
[redacted]

BIOTEST SAMPLE # 16080730

VALIDATION # NG

TEST PURPOSE NG

PRODUCT	WA09-RB40917 11779, WA09-RB40918 11780, UCSD223i-NDC1-1-DB26652 11781, STAN002i-161-1-DB31139 11782, PENN001i-87-2-DB36483 11783, PENN002i-442-1-DB35052 11784, PENN066i-427-6-DB35047 11785, PENN074i-415-3-DB35036 11788, PENN134i-61-26-DB35028 11786, WA25-WB40296 11787
PRODUCT LOT	NA
STERILE LOT	NA
STERILIZATION LOT	NA
STERILIZATION DATE	NA
STERILIZATION METHOD	EO
SAMPLING BLDG / ROOM	NA
REFERENCE	Processed according to LAB-003: Sterility Test Procedure

BI LOT	NA
BI EXPIRATION DATE	NA
DATE RECEIVED	2016-08-11
TEST INITIATED	2016-08-11
TEST COMPLETED	2016-08-25

Ten (10) products were divided between 40 mL TSB and 40 mL FTG. The sample was then cultured at 20-25 C and 30-35 C respectively and was monitored for a minimum of 14 days.

☒ USP
☐ BI Manufacturers Specifications
☐ Other

RESULTS	# POSITIVES	# TESTED	POSITIVE CONTROL	NEGATIVE CONTROL
Sterile	0	10	NA	2 Negatives

COMMENTS NA

REVIEWED BY [redacted] DATE 26AUG16

Mycoplasma Detection Assay Report

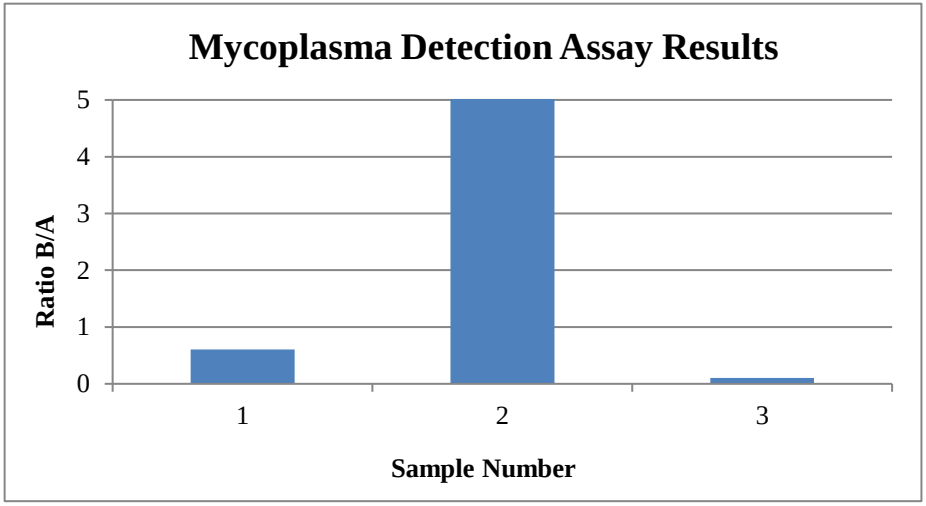
Testing Performed by WiCell

Lot Release Test

August 5th, 2016

FORM SOP-QU-004.01
Version F Edition 01
Reported by: SM
Reviewed by: JB
Berthold Flash n' Glo 539

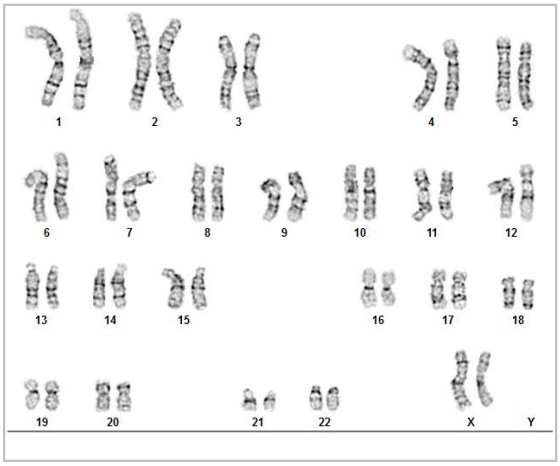
#	Sample Name	Reading A		A Ave	Reading B		B Ave	Ratio B/A	Result	Comments/Suggestions
		RLU1	RLU2		RLU1	RLU2				
1	PENN001i-87-2-DB36483 11771	214	211	212.5	127	129	128	0.60	Negative	
2	Positive (+) Control	373	381	377	8464	8514	8489	22.52	Positive	
3	Negative (-) Control	237	244	240.5	26	24	25	0.10	Negative	



Chromosome Analysis Report: 042799

Date Reported: Friday, August 19, 2016
Cell Line: PENN001i-87-2-DB36483 11771
Passage#: 14
Date of Sample: 8/12/2016
Specimen: iPSC
Results: 46,XX

Cell Line Gender: Female
Reason for Testing: Lot release testing
Investigator: [redacted], CDM



Cell: 32
Slide: 1
Slide Type: Karyotype

Total Counted: 20
Total Analyzed: 8
Total Karyogrammed: 4
Band Resolution: 425 - 475

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], 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 may not be relied upon by any other party without the prior written consent of the Director of the WiCell Cytogenetics Laboratory. The resu lts of this assay are for research use only. If the results of this assay are to be used for any other purpose, contact the Director of the WiCell Cytogenetics Laboratory.

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