

Thaw and Culture Details

| Cell Line Name | PENN086i-278-1 | | |
|----------------------------------|---|--|--|
| WiCell Lot Number | DB34737 | | |
| 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 2 wells of a 6 well plate using Stem Cell Culture Medium and MEF. WiCell recommends thawing using ROCK Inhibitor for best results. | | |
| Culture Platform | Feeder Dependent | | |
| | Medium: Stem Cell Culture Medium | | |
| | 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 | | |
| Data Violad | cells at thaw should be labeled passage 14. 11-February-2015 | | |
| Date Vialed | , | | |
| Vial Label | iPS-278 SeV1 p13 02/11/15 KS | | |
| 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 | Recoverable attachment after passage | Pass |
| Identity by STR | UW Translational Research Initiatives in Pathology Laboratory | 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.

- SNP microarray
- Flow Cytometry (Tra1-60 and SSEA-4)
- Differentiation into hepatocytes
- Infinium® Expanded Multi-Ethnic Genotyping Array (MEGAEX)



| Approval Date | Quality Assurance Approval | |
|---------------|---|--|
| 27-June-2016 | 10/8/2020 X JKG JKG Quality Assurance Signed by Gay, Jenna | |



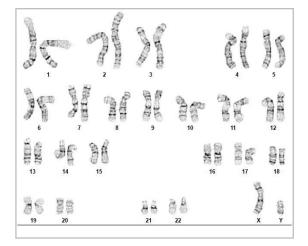
Chromosome Analysis Report: 082714

Date Reported: Friday, September 4, 2020

Cell Line: PENN086i-278-1-DB34737

Submitted Passage #: 15 Date of Sample: 8/28/2020 Specimen: Human IPSC

Results: 46,XY



Cell Line Sex: Male

Reason for Testing: LOT_RELEASE

Investigator: WiCell Stem Cell Bank, WiCell

Cell: 45

Slide: G02

Slide Type: Karyotype

Total Counted: 20 Total Analyzed: 8

Total Karyogrammed: 4

Band Resolution: 425 - 525

Interpretation:

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

| Completed by: | , CG(ASCP) |
|------------------------------|------------|
| Reviewed and Interpreted by: | , Ph.D. |

| Date: | Sent By: | Sent To: | QC Review By: |
|--|---------------------------|---|---|
| Limitations: This assay allows for microscopic visua | alization of numerical ar | nd structural chromosome abnormalities. | The size of structural abnormality that can be dete |

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.



Your Lab Partner characterization@wicell.org (608) 316-4145

Department of Pathology and Laboratory Medicine TRIP Laboratory (Molecular) https://research.pathology.wisc.edu/trip-home/ (608) 265-9168

Short Tandem Repeat Analysis

Receive Date: 08/31/20 **Report Sent:** 09/08/20

Requestor: WiCell Characterization

| Label on tube | 82578 | 82580 | 82713 | 82714 | 82715 |
|-----------------------|-------------------------------------|-----------------------------------|-------------------------------------|--|--|
| Label on Report | H9 inGFPhES-WB67521 p.40 (82578) | CHB8-PCBC-DB66974 p.35 (82580) | H13-FMR1-KO-WB67530 p.54 (82713) | PENN086i-278-1-DB34737 p.15 (82714) | PENN062i-278-2-DB34984 p.15 (82715) |
| conc (ng/μL) | | | | | |
| A260/280 | | | | | |
| Assay Date | | | | | |
| File Name | | | Identifying | | |
| FGA | | | Identifying information has | | |
| TPOX | | | been redacted to | | |
| D8S1179 | | | protect donor confidentiality. If | | |
| vWA | | | more information | | |
| Amelogenin | | | is required, | | |
| Penta_D | | | please, contact WiCell's Technical | | |
| CSF1PO | | | Support. | | |
| D16S539 | | | | | |
| D7S820 | | | | | |
| D13S317 | | | | | |
| D5S818 | | | | | |
| Penta_E | | | | | |
| D18S51 | | | | | |
| D21S11 | | | | | |
| TH01 | | | | | |
| D3S1358 | | | | | |
| Allelic Polymorphisms | 24 | 27 | 28 | 25 | 25 |
| Matches* | | | | | |
| Comments | | | | | |



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Short Tandem Repeat Analysis

<u>Results:</u> Based on the DNA submitted by WiCell Characterization Department dated and received on 08/31/20, these samples define the STR profiles of the human cell lines as indicated by name. The genotypic profiles comprise a range of 24-28 allelic polymorphisms across the 15 STR loci analyzed.

<u>Interpretation:</u> 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%.

Acknowledge TRIP in your publications, posters & presentations. For details, see: https://research.pathology.wisc.edu/acknowledging-trip/

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

X RMB
Digitally Signed on 09/08/20

BA

TRIP Laboratory, Molecular

Digitally Signed on 09/08/20

WMR
Digitally Signed on 09/08/20

UWHC Molecular Diagnostics Laboratory / UWSMPH TRIP Laboratory

Testing was accomplished by analysis of human genetic polymorphisms at STR loci. This methodology has not yet been approved by the FDA and is for investigational use only.

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Native Product Sterility Report



SAMPLE #:

20081640

DATE RECEIVED:

27-Aug-20

TEST INITIATED:

02-Sep-20

TEST COMPLETED:

16-Sep-20

SAMPLE NAME / DESCRIPTION:

504 S Rosa Road, Rm 101

Madison, WI 53719

WiCell

PENN062i-278-2-DB34984 PENN086i-278-1-DB34737

PENN138i-24-4-DB34721 PENN060i-23-1-DB34969

CCHMC 0336-001-02 CLONE #38 (82488) CCHMC 0336-001-02 CLONE #60 (82489) CCHMC 0344-001-08 CLONE #32 (82490) CCHMC 0344-001-08 CLONE #69 (82491)

H13-FMR1-KO-WB67530 SCRP0709i-DB42028

UNIQUE IDENTIFIER:

N/A

TEST RESULTS:

| | # Positives | |
|----------|-------------|-------------|
| # Tested | (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 295EP2020

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

FORM SOP-83.01 Version 01

PCR-based assay performed by WiCell WiCell 19Aug20

| Sample Name | Result | Comments/Suggestions |
|--------------------------------|-----------------|---|
| PENN022i-89-1-DB36532 (82387) | Negative | Band was not seen at 270bp, indicating the absence of mycoplasma. |
| PENN060i-23-1-DB34969 (82388) | Negative | Band was not seen at 270bp, indicating the absence of mycoplasma. |
| PENN062i-278-2-DB34984 (82389) | Negative | Band was not seen at 270bp, indicating the absence of mycoplasma. |
| PENN086i-278-1-DB34737 (82390) | Negative | Band was not seen at 270bp, indicating the absence of mycoplasma. |
| PENN138i-24-4-DB34721 (82391) | Negative | Band was not seen at 270bp, indicating the absence of mycoplasma. |
| STAN215i-490C3-WB67522 (82392) | Negative | Band was not seen at 270bp, indicating the absence of mycoplasma. |
| INC 123 17Aug20KR (82399) | Negative | Band was not seen at 270bp, indicating the absence of mycoplasma. |
| Positive (+) Control | Positive | |
| Negative (-) Control | Negative | |

Reported by: Assistant Research Specialist Reviewed by: Cell Culture Specialist

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A gel image is available upon request.