

Thaw and Culture Details

| Cell Line Name | JHU225i | | |
|-------------------------------------|--|--|--|
| WiCell Lot Number | DB41417 | | |
| Provider | Johns Hopkins University – Laboratory of Dr. Lewis Becker | | |
| Banked By | Johns Hopkins University – Laboratory of Dr. Lewis Becker | | |
| Thaw and Culture Recommendations | WiCell recommends thawing 1 vial into 4 wells of a 6 well plate. WiCell recommends thawing using ROCK Inhibitor for best results. | | |
| Culture Platform | Feeder Independent | | |
| | Medium: E8 | | |
| | Matrix: Vitronectin | | |
| Protocol | WiCell Feeder Independent E8 Medium Protocol | | |
| Passage Number | p6 These cells were cultured for 6 passages post reprogramming prior to freeze. Add +1 to the passage number to best represent the overall passage number of the cells at thaw. | | |
| Date Vialed | 18-June-2016 | | |
| Vial Label | P225 P6 6/18/16 0.6M | | |
| Biosafety and Use Information | This cell line is of human origin. 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-CH-003 | Expected karyotype | See Report | |
| Post-Thaw Viable Cell Recovery | WiCell | 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 | Steris | ST/07 | Negative | Pass | |
| Mycoplasma | WiCell | SOP-CH-044 | 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.

- Embryoid bodies
- Infinium[®] Expanded Multi-Ethnic Genotyping Array (MEGA^{EX})

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| Approval Date | Quality Assurance Approval | | |
|----------------|--|--|--|
| 22-August-2016 | 8/17/2022 K HEB Gaality Assurance Signed by Bruner, Haley | | |

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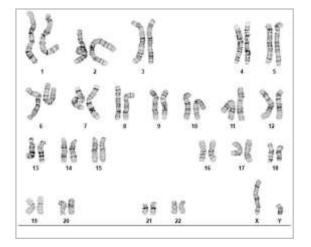
The material provided under this certificate has been subjected to the tests specified and the results and data described herein are accurate based on WiCell's reasonable knowledge and belief. Appropriate Biosafety Level practices and universal precautions should always be used with this material. For clarity, the foregoing is governed solely by WiCell's Terms and Conditions of Service, which can be found at http://www.wicell.org/privacyandterms.



Date Reported: Friday, July 26, 2019 Cell Line: JHU225i-DB41417 14900 Passage#: 7 Date of Sample: 7/19/2019 Specimen: Human IPSC Results: 46,XY Cell Line Sex: Male Reason for Testing: lot release testing

Investigator:

, WiCell



Cell: 27 Slide: G03 Slide Type: Karyotype Total Counted: 20 Total Analyzed: 8 Total Karyogrammed: 4 Band Resolution: 450 - 575

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:
 ________, PhD, FACMG

 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 or effect.

TRIPath

HISTOLOGY - IHC - MOLECULAR - IMAGING

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

Sample Report:

14900-STR Sample Name on Tube: 14900-STR 89.1 ng/ μ L, (A260/280=2.08) Sample Type: Cells Cell Count: ~2 million cells

Short Tandem Repeat Analysis



characterization@wicell.org (608) 316-4145

Receive Date: 07/29/19 Report Sent: 08/04/19 Assay Date: 07/30/19 File Name: STR 190731 wmr Report Date: 08/01/19

| 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 |
| ТРОХ | 6-13 | been redacted to |
| D8S1179 | 7-18 | protect donor |
| vWA | 10-22 | confidentiality. If |
| Amelogenin | X,Y | more information |
| Penta_D | 2.2, 3.2, 5, 7-17 | is required, |
| CSF1PO | 6-15 | please, contact |
| D16S539 | 5, 8-15 | WiCell's Technical Support. |
| 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 | |

<u>Results:</u> Based on the 14900-STR cells submitted by WiCell QA dated and received on 07/29/19, this sample (Label on Tube: 14900-STR) defines the STR profile of the human cell line JHU225i comprising 29 allelic polymorphisms across the 15 STR loci analyzed.

<u>Interpretation:</u> No STR polymorphisms other than those corresponding to the human JHU225i 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 14900-STR sample submitted corresponds to the JHU225i cell line and was not contaminated with any other human cells or a significant amount of mouse feeder layer cells.

<u>Sensitivity</u>: Sensitivity limits for detection of STR polymorphisms unique to either this or other human cell lines is ~2-5%.

| X RMB Digitally Signed on 08/04/19 | X WMR Digitally Signed on 08/04/19 |
|------------------------------------|--|
| BA | PhD, Director / Co-Director |
| TRIP Laboratory, Molecular | 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. Acknowledge TRIP in your publications, posters & presentations. For details, see: https://research.pathology.wisc.edu/acknowledging-trip/ 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 https://www.wicell.org/media.acux/ca76d97c-862a-43f3-b02a-ab2d1e619100. 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.

Requestor: WiCell Research Institute Quality Assurance Department

Native Product Sterility Report



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

| SAMPLE #: | 19071395 |
|-----------------|-----------|
| DATE RECEIVED: | 18-Jul-19 |
| TEST INITIATED: | 24-Jul-19 |
| TEST COMPLETED: | 07-Aug-19 |

| SAMPLE NAME / DESCRIPTION: | STAN037i-11 | 8-1 | DB309 | 906 | 14904 |
|----------------------------|-------------|-------|-------|-------|-------|
| | JHU058i | DB410 | 92 | 14905 | |
| | JHU172i | DB363 | 77 | 14906 | |
| | JHU170i | DB363 | 71 | 14907 | |
| | JHU225i | DB414 | 17 | 14908 | |
| | JHU143i | DB413 | 47 | 14909 | |
| | JHU104i | DB412 | 82 | 14910 | |
| | JHU080i | DB362 | 22 | 14911 | |
| | JHU097i | DB412 | 67 | 14912 | |
| | STAN343i-99 | 98C1 | DB35 | 654 | 14913 |
| UNIQUE IDENTIFIER: | NA | | | | |

| TEST RESULTS: | # Positives # Tested (Growth) | | - Control | |
|---------------|----------------------------------|---|-------------|--|
| | 10 | 0 | 2 Negatives | |

TEST S

| SUMMARY: | # Samples | Media Type | Volume (mL) | Incubation Temperature (° C) | Incubation Duration (Days) | |
|----------|-----------|------------------|---------------------|------------------------------------|----------------------------------|----|
| | 10 | TSB | 40 | 20-25 | 14 | |
| | 10 | FTG | 40 | 30-35 | 14 | |
| RENCE | | Processed accord | ling to LAR-003. St | erility Test Procedu | Iro | _1 |

REFERENCE: PD #: **TEST METHODOLOGY:**

Processed according to LAB-003: Sterility Test Procedure 000053 **USP** - Direct Transfer

COMMENTS: NA

REVIEWED BY

DATE OT AUY 19

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.

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Mycoplasma Assay Report

PCR-based assay performed by WiCell

WiCell 23Jul19

| # | Sample Name | Result | Comments/Suggestions |
|---|-----------------------|----------|--|
| 1 | JHU225i-DB41417 14900 | Negative | Band was not seen at 270bp, indicating the absence of mycoplasma |
| 2 | Positive (+) Control | Positive | |
| 3 | Negative (-) Control | Negative | |

Reported by: Anna Lisa Larson, Laboratory Supervisor- Characterization

Reviewed by: Brenna Anderson, Research Specialist - Characterization

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A gel image is available upon request.