



Thaw and Culture Details

| | |
|----------------------------------|--|
| Cell Line Name | MCW116i-40001890 |
| WiCell Lot Number | WB66550 |
| Provider | Medical College of Wisconsin – Laboratory of Dr. Ulrich Broeckel |
| Banked By | WiCell |
| Thaw and Culture Recommendations | WiCell recommends thawing 1 vial into 3 wells of a 6 well plate. |
| Culture Platform | Feeder Independent |
| | Medium: TeSR™-E8™ |
| | Matrix: Matrigel® |
| Protocol | WiCell Feeder Independent E8 Medium Protocol |
| Passage Number | p13 These cells were cultured for 12 passages prior to colony picking. WiCell adds +1 to the passage number to best represent the overall passage number of the cells at thaw. |
| Date Vialied | 22-August-2017 |
| Vial Label | MCW116i-40001890 p13 WB66550 |
| 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-CH-003 | Expected karyotype | Pass |
| Post-Thaw Viable Cell Recovery | WiCell | SOP-CH-305 | ≥ 15 Undifferentiated Colonies, ≤ 30% Differentiation and 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-QU-004 | 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.

- Tra1-60 marker expression
- mRNA expression by qPCR
- Infinium® Expanded Multi-Ethnic Genotyping Array (MEGA^{EX})



| Approval Date | Quality Assurance Approval |
|------------------|---|
| 10-November-2017 | <p style="text-align: right;">11/10/2017</p> <p>X JKG</p> <p><small>JKG Quality Assurance Signed by: Gay, Jenna</small></p> |

Date Reported: Friday, September 15, 2017

Cell Line: MCW116i-40001890-WB66550
12797

Passage#: 13

Date of Sample: 9/4/2017

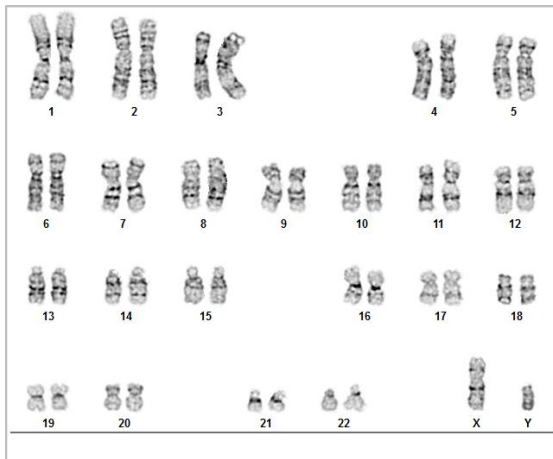
Specimen: Human IPS

Results: 46,XY

Cell Line Gender: Male

Reason for Testing: lot release testing

Investigator: Olga Ganz, WiCell CDM



Cell: 32

Slide: G02

Slide Type: Karyotype

Total Counted: 20

Total Analyzed: 8

Total Karyogrammed: 4

Band Resolution: 450 - 500

Interpretation:

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

Completed by: Kim Leonhard, CG(ASCP)

Reviewed and Interpreted by: Julie Leana Cox, 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 results 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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Short Tandem Repeat Analysis

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:

12797-STR
Sample Name on Tube: 12797-STR
23.4 ng/μL, (A260/280=1.99)
Sample Type: Cells
Cell Count: ~2 million cells

Requestor:

WiCell Research Institute
Quality Department

Sample Date: N/A

Receive Date: 09-11-17
Assay Date: 09-12-17
File Name: 170913 STR WMR
Report Date: 09/15/17

| 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 | 20,21 |
| TPOX | 6-13 | 8,11 |
| D8S1179 | 7-18 | 12,13 |
| vWA | 10-22 | 14,16 |
| Amelogenin | X,Y | X,Y |
| Penta_D | 2.2, 3.2, 5, 7-17 | 11,11 |
| CSF1PO | 6-15 | 10,12 |
| D16S539 | 5, 8-15 | 11,13 |
| D7S820 | 6-14 | 10,11 |
| D13S317 | 7-15 | 8,14 |
| D5S818 | 7-16 | 12,12 |
| Penta_E | 5-24 | 11,21 |
| D18S51 | 8-10, 10.2, 11-13, 13.2, 14-27 | 13,15 |
| 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 | 29,33.2 |
| TH01 | 4-9,9.3,10-11,13.3 | 6,7 |
| D3S1358 | 12-20 | 15,15 |

Results: Based on the 12797-STR cells submitted by WiCell QA dated and received on 09/11/17, this sample (Label on Tube: 12797-STR) defines the STR profile of the human stem cell line MCW116i-40001890 comprising 27 allelic polymorphisms across the 15 STR loci analyzed.

Interpretation: No STR polymorphisms other than those corresponding to the human MCW116i-40001890 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 12797-STR sample submitted corresponds to the MCW116i-40001890 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%.

X_{RMB}

Digitally Signed on 09/18/17

Rebecca M. Baus
TRIP Laboratory, Molecular

X_{WMR}

Digitally Signed on 09/18/17

William M. Rehrauer, PhD, Director / Co-Director
UWHC Molecular Diagnostics Laboratory / UWSMPH TRIP Laboratory

Native Product Sterility Report



**CORRECTED
REPORT**

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

SAMPLE #: 17090875
DATE RECEIVED: 14-Sep-17
TEST INITIATED: 18-Sep-17
TEST COMPLETED: 02-Oct-17

SAMPLE NAME / DESCRIPTION: MCW003i-40001883-WB66553_12835, MCW047i-U2234-WB66549_12836, MCW071i-U2177-WB66552_12837, MCW086i-40000176-WB66545_12838, MCW090i-40000374-WB66557_12839, MCW091i-U2202-WB66554_12840, MCW097i-400001654-WB66548_12841, MCW112i-40000893-WB66551_12842, MCW116i-40001890-WB66550_12843, MCW073i-40000527-WB66570_12844, MCW060i-U2183-WB66559_12845, JFHZ4-WB66573_12846, JFHZ5-WB66587_12847, JFHZ6-WB66583_12848, JFMD6-WB66581_12849, JFNY2-WB66584_12850, JFRBi5-WB66569_12851, JFWT2-WB66586_12852, JFWT4-WB66582_12853, UCSD239i-APP2-1-WB66585_12854, MCW100i-U2341-WB66575_12881, MCW114i-U2144-WB66566_12882, iPS(IMR90)-2-WB66588_12883, UCSD035i-4-4-WB62259_12884, UCSD064i-20-2-WB63303_12885, UCSD143i-87-1-WB57685_12886, UCSD161i-93-1-WB54536_12887, UCSD199i-107-1-WB59910_12888, UCSD209i-24-1-WB57661_12889, UCSD081i-1-14-WB61903_12890

UNIQUE IDENTIFIER: NA
PRODUCT REGISTRATION: Other: Human iPS Cells

TEST RESULTS:

| # Tested | # Positives (Growth) | - Control |
|----------|----------------------|-------------|
| 30 | 0 | 2 Negatives |

TEST SUMMARY:

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

REFERENCE: Processed according to LAB-003: Sterility Test Procedure
METHOD VALIDATION / PD #: 000053
TEST METHODOLOGY: USP - Direct Transfer

Native Product Sterility Report

**CORRECTED
REPORT**



STERIS

COMMENTS:

Sample # 17090875

Report revised due to Customer request to update Sample Name / Description.

REVIEWED BY _____

DATE _____

09/04/17

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.



Mycoplasma Detection Assay Report

Testing Performed by WiCell

Lot Release Testing

August 30, 2017

FORM SOP-QU-004.01

Version F Edition 02

Reported by: KR

Reviewed by: JB

BD Monolight 180

| # | Sample Name | Reading A | | | Reading B | | | Ratio B/A | Result | Comments/Suggestions |
|---|--------------------------------|-----------|------|-------|-----------|-------|-------|-----------|----------|----------------------|
| | | RLU1 | RLU2 | Ave | RLU1 | RLU2 | Ave | | | |
| 1 | MCW116i-40001890-WB66550 12797 | 251 | 252 | 251.5 | 92 | 93 | 92.5 | 0.37 | Negative | |
| 2 | Positive (+) Control | 387 | 395 | 391 | 25241 | 25413 | 25327 | 64.77 | Positive | |
| 3 | Negative (-) Control | 573 | 581 | 577 | 66 | 63 | 64.5 | 0.11 | Negative | |

