



Thaw and Culture Details

| | |
|----------------------------------|--|
| Cell Line Name | IISH2i-BM9-PCBC |
| WiCell Lot Number | DB36871 |
| Provider | WiCell Research Institute |
| Banked By | National Heart, Lung and Blood Institute Progenitor Cell Biology Consortium (NHLBI PCBC) |
| 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. The Provider recommends only dispase passaging. |
| Culture Platform | Feeder Independent |
| | Medium: mTeSR™1 |
| | Matrix: Matrigel® |
| Protocol | WiCell Feeder Independent mTeSR™1 Protocol |
| Passage Number | p28 These cells were cultured for 27 passages prior to freeze. The Provider adds +1 to the passage number at freeze to best represent what the overall passage number of the cells at thaw. Plated cells at thaw should be labeled passage 28. |
| Date Vialied | 17-AUGUST-2015 |
| Vial Label | SC13-044 p28 17Aug2015 RAS |
| 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 | See Report |
| 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 | Consistent with known 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 Synapse links, where available, are provided on the cell line specific web page on the WiCell website.

- RNA-Seq
- Teratoma representative of all three embryonic germ layers identified in all tumors with histopathological analysis
- SNP microarray
- Immunostaining analysis to confirm pluripotency and OCT4 to evaluate the presence of undifferentiated PSC
- mRNA, miRNA, and methylation profiling
- Genomics characterization
- Flow Cytometry (SSEA-1, SSEA-4, Tra 1-61, Tra 1-80, CD9, OCT-4)

| Approval Date | Quality Assurance Approval |
|-----------------|---|
| 31-January-2019 | <p style="text-align: right;">7/10/2020</p> <p>X AA _____ AA Quality Assurance Signed by: Arntz, Andy</p> |

Date Reported: Saturday, January 12, 2019

Cell Line: IISH2i-BM9-DB36871-14213

Passage#: 29

Date of Sample: 1/8/2019

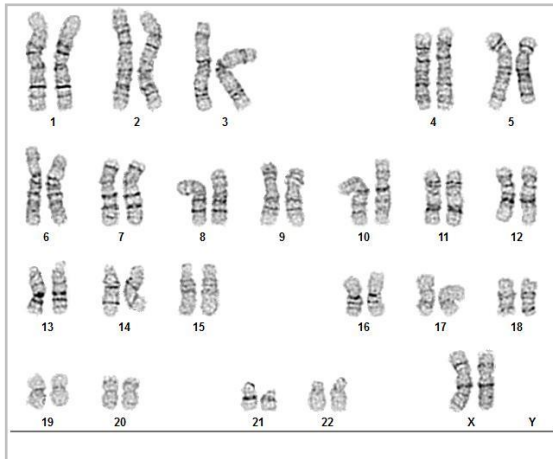
Specimen: Human IPS

Results: 46,XX

Cell Line Sex: Female

Reason for Testing: Lot Release Testing

Investigator: [REDACTED], WiCell



Cell: 8

Slide: G03

Slide Type: Karyotype

Total Counted: 20

Total Analyzed: 8

Total Karyogrammed: 4

Band Resolution: 475 - 525

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

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.



HISTOLOGY - IHC - MOLECULAR - IMAGING

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

Short Tandem Repeat Analysis



characterization@wicell.org
(608) 316-4145

Sample Report:

14213-STR

Sample Name on Tube: 14213-STR

85.1 ng/μL, (A260/280=1.87)

Sample Type: Cells

Cell Count: ~2 million cells

Requestor:

WiCell Research Institute

Quality Assurance Department

Receive Date: 01/22/19

Report Sent: 01/29/19

Assay Date: 01/24/19

File Name: STR 190125 wmr

Report Date: 01/28/19

| 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 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 14213-STR cells submitted by WiCell QA dated and received on 01/29/18, this sample (Label on Tube: 14213-STR) exactly matches the STR profile of the human stem cell line IISH2i-BM9 comprising 25 allelic polymorphisms across the 15 STR loci analyzed.

Interpretation: No STR polymorphisms other than those corresponding to the human IISH2i-BM9 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 14213-STR sample submitted corresponds to the IISH2i-BM9 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 01/29/19

X *WMR*

Digitally Signed on 01/29/19

██████████, BA
TRIP Laboratory, Molecular

██████████, PhD, Director / Co-Director
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: <http://www.pathology.wisc.edu/research/trip/acknowledging>
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Native Product Sterility Report



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

SAMPLE #: 18121076
DATE RECEIVED: 13-Dec-18
TEST INITIATED: 17-Dec-18
TEST COMPLETED: 31-Dec-18

SAMPLE NAME / DESCRIPTION: LUEL8363i-3 WB66952 14169, JHU088i DB41240 14170, JHU132i DB36272 14171, JHU102i DB41279 14172, JHU103i DB36236 14173, iPS DF19-9-7T DB36826 14174, iPS DF4-3-7T.A DB36837 14175, iPS DF6-9-9T.B DB36844 14176, MIRJT7i-mND2-0 DB36854 14177, IISH1i-BM1 DB36864 14178, IISH2i-BM9 DB36871 14179, IISH3i-CB6 DB36881 14180, WA01 DB36785 14181, WA07 DB36888 14182, WA09 DB36899 14183, WA24 DB36798 14184, JHU155i DB41365 14185, JHU184i DB41392 14186, JHU142i DB41344 14187, WA09 NA65899 14189.

UNIQUE IDENTIFIER: NA

TEST RESULTS:

| # Tested | # Positives (Growth) | - Control |
|----------|----------------------|-------------|
| 20 | 1 | 2 Negatives |

TEST SUMMARY:

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

REFERENCE: Processed according to LAB-003: Sterility Test Procedure

PD #: 000053

TEST METHODOLOGY: USP - Direct Transfer

COMMENTS: Sample labeled P142 P6 6/16/16 0.9M is positive in TSB and FTG media.

Reported as per packing slip.

REVIEWED BY

DATE

02 JAN 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.



Mycoplasma Detection Assay Report

Testing Performed by WiCell

Lot Release Testing

January 3, 2019

FORM SOP-QU-004.01

Version G Edition 02

Reported by: SM

Reviewed by: JB

Berthold Flash n' Glow 539

| # | Sample Name | Reading A | | | Reading B | | | Ratio B/A | Result | Comments/Suggestions |
|---|--------------------------|-----------|------|-----|-----------|------|------|-----------|----------|----------------------|
| | | RLU1 | RLU2 | Ave | RLU1 | RLU2 | Ave | | | |
| 1 | IISH2i-BM9-DB36871 14213 | 102 | 112 | 107 | 36 | 36 | 36 | 0.34 | Negative | |
| 2 | Positive (+) Control | 133 | 135 | 134 | 6141 | 6191 | 6166 | 46.01 | Positive | |
| 3 | Negative (-) Control | 277 | 287 | 282 | 27 | 29 | 28 | 0.10 | Negative | |

