



Certificate of Analysis

Thaw and Culture Details

| | | |
|----------------------------------|--|-------------------|
| Cell Line Name | WA09 | |
| WiCell Lot Number | WB67843 | |
| Parent Material | WA09-WB0090 | |
| Provider/Client | University of Wisconsin – Laboratory of Dr. James Thomson | |
| Banked By | WiCell | |
| Thaw and Culture Recommendations | WiCell recommends thawing 1 vial into 3 wells of a 6 well plate using mTeSR™ Plus and Matrigel®. | |
| Protocol | WiCell Feeder Independent Pluripotent Stem Cell Protocol | |
| Culture Platform Prior to Freeze | Medium: mTeSR™ Plus | Matrix: Matrigel® |
| Passage Number | p26 Cells were cultured for 25 passages prior to freeze. Plated cells at thaw should be labeled passage 26. | |
| Date Viald | 16-February-2022 | |
| Vial Label | WA09 p26 WB67843 | |
| 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. | |



Certificate of Analysis

Results

| Test Description | Test Provider | Test Method | Test Specification | Result |
|--------------------------------|---|--|---|------------|
| Karyotype | WiCell | G-T-L Banding performed on 20 metaphase cells | Expected karyotype | See Report |
| | Results: 46,XX Interpretation: This is a normal karyotype; no clonal abnormalities were detected at the stated band level of resolution. | | | |
| Post-Thaw Viable Cell Recovery | WiCell | Thaw using specified Thaw & Culture Recommendations | ≥ 15 Undifferentiated Colonies prior to passage, ≤ 30% Differentiation prior to passage, and recoverable attachment after passage | Pass |
| Identity by STR | WiCell | PowerPlex 16 HS System by Promega™ | Consistent with STR profile of deposited cell line | See Report |
| Mycoplasma | WiCell | PCR | Amplification of mycoplasma specific DNA detected with negative result | Pass |
| Sterility | Steris | Native Product Direct Transfer using FTM and TSB (ST/07) | Negative for growth following 14 days of culture | Pass |

| Approval Date | WiCell Quality Assurance Approval |
|---------------|--|
| 20-April-2022 | <div>7/12/2023</div> <div>X Ryen Smith</div> <div><small>JRG WiCell Quality Assurance Signed by: Smith, Ryen</small></div> |

Date Reported: Friday, March 4, 2022

Cell Line: WA09-WB67843

Submitted Passage #: 26

Date of Sample: 3/2/2022

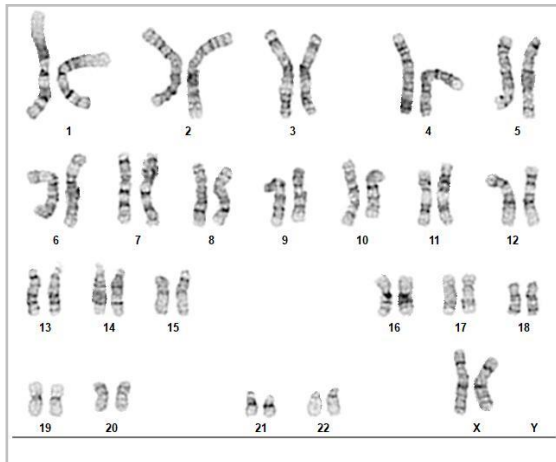
Specimen: Human ESC

Results: 46,XX

Cell Line Sex: Female

Reason for Testing: LOT_RELEASE

Investigator: WiCell Stem Cell Bank, WiCell



Cell: 10

Slide: G03

Slide Type: Karyotype

Total Counted: 20

Total Analyzed: 8

Total Karyogrammed: 4

Band Resolution: 425 - 450

Interpretation:

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

Completed by: Jennifer Pecos, CG(ASCP)

Reviewed and Interpreted by: Vanessa Horner, PhD, FACMG

For internal use only

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.



Short Tandem Repeat

Requestor: WiCell Stem Cell Bank, WiCell

Samples Received: 02Mar22, 08Mar22

STR Amplification Date: 09Mar22

Form SOP-89.01

Version 7.0

| Sample Name | WA09- WB67844 p26 | WA09- WB67843 p26 | UCSD241i- APP2-3- WB67845 p21 |
|-----------------------|--|----------------------|--|
| Label on tube | 90917 | 90918 | 90998 |
| FGA | Identifying information has been redacted to protect donor confidentiality. If more information is required, please contact info@wicell.org | 26, 28 | Identifying information has been redacted to protect donor confidentiality. If more information is required, please contact info@wicell.org |
| TPOX | | 10, 11 | |
| D8S1179 | | 8, 14 | |
| vWA | | 17, 17 | |
| Amelogenin | | X, X | |
| Penta_D | | 9, 13 | |
| CSF1PO | | 11, 11 | |
| D16S539 | | 12, 13 | |
| D7S820 | | 9, 11 | |
| D13S317 | | 9, 9 | |
| D5S818 | | 11, 12 | |
| Penta_E | | 11, 14 | |
| D18S51 | | 13, 13 | |
| D21S11 | | 30, 30 | |
| TH01 | | 9.3, 9.3 | |
| D3S1358 | | 13, 16 | |
| Allelic Polymorphisms | 24 | 24 | 28 |
| Matches* | See Matches Comment | See Matches Comment | See Matches Comment |
| Comments | | | |

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



Short Tandem Repeat

Requestor: WiCell Stem Cell Bank, WiCell

Samples Received: 02Mar22, 08Mar22

STR Amplification Date: 09Mar22

Form SOP-89.01

Version 7.0

Assay Description: STR analysis is performed using the PowerPlex 16 HS System by Promega™. Results are reported as 13 CODIS STR markers, Amelogenin for gender determination and two low-stutter, highly discriminating pentanucleotide STR markers.

Results: The genotypic profiles comprise a range of 24-28 allelic polymorphisms across the 15 STR loci analyzed.

Interpretation: 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%.

Matches: Samples 90917 and 90918 are exact matches to each other and to 84476, 84477, 84552, 84553, 84656, 84930, 84931, 84932, 86113, 89607, and additional profiles. Additional matches can be provided upon request.

Matches: Sample 90998 is an exact match to 67074, 67101, 68023, 75167, 87113, 89245, 90282, 90283, and 90431.

| | | |
|---|---|---|
| 3/10/2022 | 3/10/2022 | 3/11/2022 |
| X Hannah Rueth | X Amber Kuhn | X Dawn Graham |
| Tech #1 Characterization Signed by: Rueth, Hannah | Tech #2 Characterization Signed by: Kuhn, Amber | QA Review Quality Assurance Signed by: Graham, Dawn |

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Raw data is available upon request.



Mycoplasma Assay Report

PCR-based assay performed by WiCell
WiCell Stem Cell Bank, WiCell
07Mar22

Form SOP-83.01
Version 4.0

| Sample Name | Result | Interpretation |
|--------------------------|----------|---|
| WA09-WB67844 p26 (90917) | Negative | Band was not seen at 270bp, indicating the absence of mycoplasma. |
| WA09-WB67843 p26 (90918) | Negative | Band was not seen at 270bp, indicating the absence of mycoplasma. |
| Positive (+) Control | Positive | |
| Negative (-) Control | Negative | |

Assay Description

Sample is tested for presence of mycoplasma using EZ-PCR™ Mycoplasma Detection Kit (Sartorius).

| | | |
|--|--|---|
| 3/7/2022 | 3/8/2022 | 3/8/2022 |
| <div>X Amber Kuhn</div> <div>Tech #1 Characterization Signed by: Kuhn, Amber</div> | <div>X Hannah Rueth</div> <div>Tech #2 Characterization Signed by: Rueth, Hannah</div> | <div>X Andy Arntz</div> <div>QA Review Quality Assurance Signed by: Arntz, Andy</div> |

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A gel image is available upon request.

Native Product Sterility Report



**CORRECTED
REPORT #2**

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

SAMPLE #: 22031046
DATE RECEIVED: 17-Mar-22
TEST INITIATED: 28-Mar-22
TEST COMPLETED: 11-Apr-22

SAMPLE NAME / DESCRIPTION: WA09-WB67843
WA09-WB67844
UCSD241i-APP2-3-WB67845
iPS(IMR90)-4-WB67846
iPS(IMR90)-4-WB67847
STAN158i-336C2-DB44540
STAN159i-336C3-DB44543
STAN122i-193C1-DB35800
STAN162i-345C2-DB38177
STAN121i-193C2-DB35803

UNIQUE IDENTIFIER: N/A

TEST RESULTS:

| # Tested | # Positives (Growth) | - Control |
|----------|-------------------------|-------------|
| 10 | 4 | 2 Negatives |

TEST SUMMARY:

| # Samples | Media Type | Volume (mL) | Incubation Temperature (° C) | Incubation Duration (Days) |
|-----------|------------|-------------|------------------------------------|----------------------------------|
| 10 | TSB | 40 | 20-25 | 14 |
| 10 | FTG | 10 | 30-35 | 14 |

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

PD #: 000053

TEST METHODOLOGY: USP - Direct Transfer

COMMENTS: Corrected report revised due to updated comments.

Report revised due to updated Sample Name/Description.

Sample labeled STAN122i-193C1-DB35800 positive for TSB and FTG

Sample labeled STAN121i-193C2-DB35803 positive for TSB and FTG

REVIEWED BY 

DATE 18 APR 2022

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.