

Thaw and Culture Details

| Cell Line Name | UCSD184i-8-1 |
|-------------------------------------|---|
| WiCell Lot Number | WB55338 |
| Provider | University of California, San Diego – Dr. Kelly Frazer |
| Banked By | WiCell |
| Thaw and Culture Recommendations | WiCell recommends thawing 1 vial into 4 wells of a 6 well plate. |
| Culture Platform | Feeder Independent |
| | Medium: mTeSR™1 |
| | Matrix: Matrigel® |
| Protocol | WiCell Feeder Independent mTeSR™1 Protocol |
| Passage Number | p30 These cells were cultured for 29 passages prior to freeze and post reprogramming. WiCell adds +1 to the passage number to best represent the overall passage number of the cells at thaw. |
| Date Vialed | 18-December-2016 |
| Vial Label | UCSD184i-8-1 p30 WB55338 |
| 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

| | <u> </u> | | | |
|--|---------------|---|---|------------|
| 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 | ≥ 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.

- Illumina® HumanCoreExome BeadChip Array
- RNA-Seq
- Flow Cytometry (SSEA-4, Tra 1-81)
- Infinium® Expanded Multi-Ethnic Genotyping Array (MEGAEX)



| Approval Date | Quality Assurance Approval | | |
|-----------------|---|--|--|
| 04-January-2017 | 3/31/2018 X JKG WG Quality Assurance Signed by. Gay, Jenna | | |



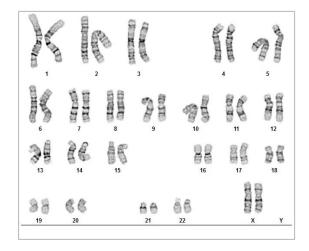
Chromosome Analysis Report: 070687

Date Reported: Monday, March 05, 2018 Cell Line: UCSD184i-8-1-WB55338 13496

Passage#: 30

Date of Sample: 2/27/2018 Specimen: Human IPS

Results: 46,XX



Cell Line Gender: Female

Reason for Testing: lot release testing

Investigator: , WiCell CDM

Cell: 48

Slide: G03

Slide Type: Karyotype

Total Counted: 20
Total Analyzed: 8

Total Karyogrammed: 4
Band Resolution: 475 - 550

Interpretation:

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

Completed by: Reviewed and Interpreted by: , CG(ASCP) , 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.

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 Analysis

HISTOLOGY - IHC - MOLECULAR - IMAGING

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: 13496-STR

Sample Name on Tube: 13496-STR

 $87.2 \text{ ng/}\mu\text{L}$, (A260/280=1.88)

Sample Type: Cells

Cell Count: ~2 million cells

Requestor:

WiCell Research Institute Quality Department **Sample Date:** N/A **Receive Date:** 03/05/18

Assay Date: 03/06/18 **File Name:** STR 180307 wmr

Report Date: 03/13/18

| 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 |
| TPOX | 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 WiCell's Technical |
| D16S539 | 5, 8-15 | Support. |
| D7S820 | 6-14 | опрроп. |
| 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 13496-STR cells submitted by WiCell QA dated and received on 03/05/18, this sample (Label on Tube: 13496-STR) defines the STR profile of the human stem cell line UCSD184i-8-1 comprising 26 allelic polymorphisms across the 15 STR loci analyzed.

<u>Interpretation:</u> No STR polymorphisms other than those corresponding to the human UCSD184i-8-1 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 13496-STR sample submitted corresponds to the UCSD184i-8-1 stem cell line and was not contaminated with any other human stem 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 stem cell lines is $\sim 2-5\%$.

X RMB Digitally Signed on 03/14/18

Digitally Signed on 03/14/18

Note: The property of the pr

Native Product Sterility Report

SAMPLE NAME / DESCRIPTION:



SAMPLE #: 18020291

WiCell DATE RECEIVED: 06-Feb-18

504 S. Rosa Rd., Rm 101 TEST INITIATED: 07-Feb-18

Madison, WI 53719 TEST COMPLETED: 21-Feb-18

CREM015i-SS16-1 WB66723 13311, CREM016i-SS18-1 WB66712 13312,

CREM019i-SS25-1 WB66728 13313, CREM021i-SS29-1 WB66729 13314, H9-SOX2-GFP WB66727 13315, WC005i-FX11-7 WB20338 13316, WC009i-FX08-01 WB17924 13317, PENN015i-668-5 DB36410 13318, PENN029i-752-3 DB36392 13319, PENN009i-57-52 DB35131 13320, PENN034i-322-1 DB34729 13321, PENN077i-521-1 DB36597 13322, PENN125i-233-4 DB35073 13323, PENN136i-

262-1 DB35081 13324, UCSD048i-52-1 WB66722 13325, UCSD208i-111-1 WB66730 13326, UCSD133i-79-1 WB61228 13327, UCSD152i-11-3 WB61663 13328, UCSD168i-22-1 WB61577 13329, UCSD170i-22-3 WB60774 13330, UCSD175i-18-3 WB60837 13331, UCSD066i-67-1 WB60392 13332, UCSD099i-

35-2 WB65030 13334, UCSD117i-72-1 WB60039 13335, UCSD119i-38-2 WB60256 13336, UCSD125i-7-2 WB59219 13337, UCSD128i-7-5 WB60297 13338, UCSD151i-11-2 WB59218 13339, UCSD158i-12-4 WB60020 13340, UCSD088i-6-5 WB53942 13341, UCSD147i-10-2 WB54174 13342, UCSD167i-99-

1 WB54407 13343, UCSD198i-23-1 WB54163 13344, UCSD098i-35-1 WB55340 13345, UCSD100i-36-1 WB55460 13346, UCSD129i-75-1 WB54795 13347, UCSD136i-82-1 WB54902 13348, UCSD139i-85-1 WB55345 13349, UCSD173i-

18-1 WB54899 13350, UCSD187i-104-1 WB55339 13351, UCSD206i-31-1 WB54794 13352, UCSD217i-115-1 WB55069 13353, UCSD218i-116-1 WB55459

13354, UCSD094i-25-1 WB55177 13355, UCSD095i-25-2 WB57580 13356, UCSD097i-34-2 WB57100 13357, UCSD113i-68-1 WB57056 13358, UCSD115i-

70-1 WB55081 13359, UCSD184i-8-1 WB55338 13360, UCSD188i-105-1

WB55082 13361

UNIQUE IDENTIFIER:

PRODUCT REGISTRATION:

NA

Other: Human iPS cells

TEST RESULTS:

| # Tested | # Positives (Growth) | - Control |
|----------|-------------------------|------------|
| 50 | 0 | 3 Negative |

TEST SUMMARY:

| # Samples | Media Type | Volume (mL) | Incubation Temperature (° C) | Incubation Duration (Days) |
|-----------|------------|-------------|------------------------------------|----------------------------------|
| 50 | TSB | 40 | 20-25 | 14 |
| 50 | FTG | 40 | 30-35 | 14 |

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

METHOD VALIDATION / PD #: 000053

TEST METHODOLOGY: USP - Direct Transfer

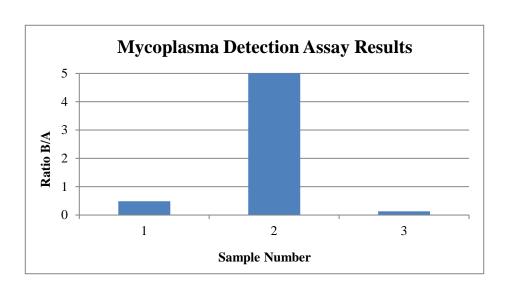
STERIS Laboratories, Inc. 9303 West Broadway Ave Brooklyn Park, MN 55445



Mycoplasma Detection Assay Report Testing Performed by WiCell

Testing Performed by WiCell Lot Release Testing March 1, 2018 FORM SOP-QU-004.01 Version G Edition 02 Reported by: AP Reviewed by: JB BD Monolight 180

| | | Read | ing A | A | Read | ling B | В | Ratio | | |
|---|----------------------------|------|-------|-----|-------|--------|-------|-------|----------|----------------------|
| # | Sample Name | RLU1 | RLU2 | Ave | RLU1 | RLU2 | Ave | B/A | Result | Comments/Suggestions |
| 1 | UCSD184i-8-1-WB55338 13496 | 238 | 260 | 249 | 114 | 129 | 121.5 | 0.49 | Negative | |
| 2 | Positive (+) Control | 388 | 400 | 394 | 34112 | 34379 | 34246 | 86.92 | Positive | |
| 3 | Negative (-) Control | 706 | 732 | 719 | 101 | 92 | 96.5 | 0.13 | Negative | |



Native Product Sterility Report



| CO | | | | | _ |
|----|-------|-----|---|------------|------------|
| | IN /I | NИ | | VI I | <u> </u> |
| - | IVI | IVI | _ | V I | . . |

Sample # 18020291

REVIEWED BY

DATE 22 FEBIS

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.