



Thaw and Culture Details

| | |
|----------------------------------|--|
| Cell Line Name | UCSD063i-20-1 |
| WiCell Lot Number | WB62421 |
| 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 | p18 These cells were cultured for 17 passages prior to freeze and post reprogramming. WiCell 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 18. |
| Date Vialied | 05-April-2017 |
| Vial Label | UCSD063i-20-1 p18 WB62421 |
| 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 |
| | Results: 47,XX,+8[2]/46,XX[18] Interpretation: This is an abnormal karyotype. Trisomy 8 is present in two of twenty cells examined. Gain of chromosome 8 is recurrently acquired in cultures of this cell type. No other clonal abnormalities were detected at the stated band level of resolution. | | | |
| 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

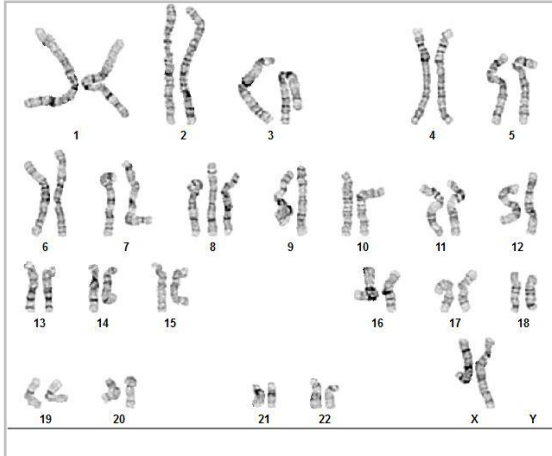
The Provider stated that some or all of the additional analyses listed below may have been performed for this cell line. For more information, publication and dbGaP links, where available, are provided on the cell line specific web page on the WiCell website.

- Illumina® HumanCoreExome BeadChip Array
- RNA-Seq
- Flow Cytometry (SSEA-4, Tra 1-81)
- Infinium® Expanded Multi-Ethnic Genotyping Array (MEGA^{EX})

| Approval Date | Quality Assurance Approval |
|---------------|--|
| 20-April-2017 | <p style="text-align: right;">7/29/2018</p> <p>X JKG JKG Quality Assurance Signed by: Gay, Jenna</p> |

Date Reported: Friday, July 06, 2018
Cell Line: UCSD063i-20-1-WB62421 13826
Passage#: 18
Date of Sample: 7/2/2018
Specimen: Human IPS
Results: 47,XX,+8[2]/46,XX[18]

Cell Line Sex: Female
Reason for Testing: lot release testing
Investigator: [REDACTED], WiCell



Cell: 9
Slide: G01
Slide Type: Karyotype

Total Counted: 20
Total Analyzed: 9
Total Karyogrammed: 5
Band Resolution: 450 - 575

Interpretation:

This is an abnormal karyotype. Trisomy 8 is present in two of twenty cells examined. Gain of chromosome 8 is recurrently acquired in cultures of this cell type. No other clonal abnormalities were detected at the stated band level of resolution.

Completed by: [REDACTED]
Reviewed and Interpreted by: [REDACTED], 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 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 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:

13826-STR

Sample Name on Tube: 13826-STR

84.5 ng/μL, (A260/280=1.85)

Sample Type: Cells

Cell Count: ~2 million cells

Requestor:

WiCell Research Institute

Quality Department

Sample Date: N/A

Receive Date: 07/09/18

Assay Date: 07/11/18

File Name: STR 180712 wmr

Report Date: 07/18/18

| 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 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 13826-STR cells submitted by WiCell QA dated and received on 07/09/18, this sample (Label on Tube: 13826-STR) defines the STR profile of the human stem cell line UCSD063i-20-1 comprising 25 allelic polymorphisms across the 15 STR loci analyzed.

Interpretation: No STR polymorphisms other than those corresponding to the human UCSD063i-20-1 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 13826-STR sample submitted corresponds to the UCSD063i-20-1 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 07/19/18

BA
TRIP Laboratory, Molecular

X_{WMR} Digitally Signed on 07/19/18

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> TRIP agrees to maintain the confidentiality of any information provided to it in connection with its performance of this STR analysis on the same conditions as set forth in paragraph 2 of WiCell's Terms and Conditions of Service (<http://www.wicell.org/media.acux/1a429b84-2b54-44a4-8ad8-5c05db93dd8a>).

Native Product Sterility Report



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

SAMPLE #: 17121502
DATE RECEIVED: 21-Dec-17
TEST INITIATED: 26-Dec-17
TEST COMPLETED: 09-Jan-18

SAMPLE NAME / DESCRIPTION:

- UCSD050i-54-1 WB54411 13186
- UCSD051i-55-1 WB54717 13187
- UCSD052i-56-1 WB57717 13188
- UCSD053i-57-1 WB55067 13189
- UCSD054i-58-1 WB55461 13190
- UCSD055i-59-1 WB54168 13191
- UCSD056i-60-1 WB57571 13192
- UCSD057i-61-1 WB55674 13193
- UCSD058i-62-1 WB57057 13194
- UCSD059i-63-1 WB63472 13195
- UCSD060i-64-1 WB57102 13196
- UCSD063i-20-1 WB62421 13197
- WISCO15i-SC7 WB66708 13198
- UCSD235i-SAD2-4 WB66703 13199
- STAN053i-149-1 WB66707 13200
- HVRDi002-A WB66709 13201
- WISCO14i-SC1 WB66706 13202
- CREM032i-SS48-1 WB66711 13203
- UCSD207i-31-2 WB66716 13204
- UCSD065i-20-3 WB60829 13205

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

TEST RESULTS:

| # Tested | # Positives (Growth) | - Control |
|----------|----------------------|-------------|
| 20 | 0 | 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
METHOD VALIDATION / PD #: 000053

Native Product Sterility Report



TEST METHODOLOGY: USP - Direct Transfer

COMMENTS: Sample # 17121502

REVIEWED BY *Wesad*

DATE 10 JAN 18

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

July 5, 2018

FORM SOP-QU-004.01

Version G Edition 02

Reported by: AP

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 | UCSD063i-20-1-WB62421 13826 | 283 | 286 | 284.5 | 178 | 195 | 186.5 | 0.66 | Negative | |
| 2 | Positive (+) Control | 390 | 381 | 385.5 | 61000 | 61163 | 61082 | 158.45 | Positive | |
| 3 | Negative (-) Control | 820 | 821 | 820.5 | 113 | 101 | 107 | 0.13 | Negative | |

