



## Thaw and Culture Details

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cell Line Name                   | UCSD114i-69-1                                                                                                                                                                                                                                                                                                                                                                                              |
| WiCell Lot Number                | WB55346                                                                                                                                                                                                                                                                                                                                                                                                    |
| Provider                         | University of California, San Diego – Dr. Kelly Frazer                                                                                                                                                                                                                                                                                                                                                     |
| 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: mTeSR™1                                                                                                                                                                                                                                                                                                                                                                                            |
|                                  | Matrix: Matrigel®                                                                                                                                                                                                                                                                                                                                                                                          |
| Protocol                         | WiCell Feeder Independent mTeSR™1 Protocol                                                                                                                                                                                                                                                                                                                                                                 |
| Passage Number                   | p28<br>These cells were cultured for 27 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 Vialied                     | 15-December-2016                                                                                                                                                                                                                                                                                                                                                                                           |
| Vial Label                       | UCSD114i-69-1<br>p28<br>WB55346                                                                                                                                                                                                                                                                                                                                                                            |
| 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.<br>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                                                                             | Fail   |
|                                | <p><b>Results:</b> 46,XY,del(18)(q21.1q21.3)[20]<br/> <b>Interpretation:</b> This is an abnormal karyotype. There is an apparent interstitial deletion in the long (q) arm of chromosome 18 in twenty of twenty cells examined. This deletion appears to involve 18q21.2; this is a recurrent acquired abnormality in human pluripotent stem cell cultures. No other clonal abnormalities were found.</p> |                                   |                                                                                                |        |
| 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

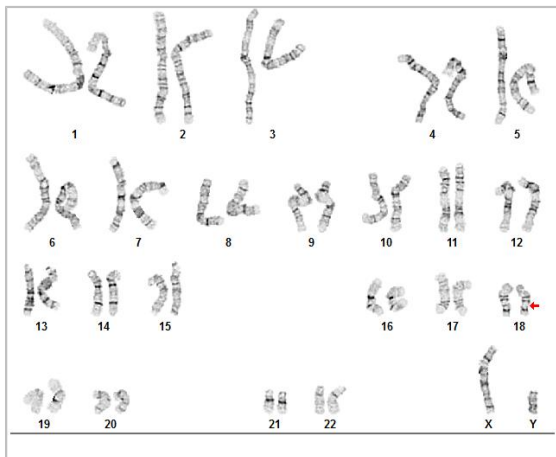
The Provider stated that some or all of the additional analyses listed below may have been performed for this cell line. For more information, publication and dbGaP links, where available, are provided on the cell line specific web page on the WiCell website.

- Illumina® HumanCoreExome BeadChip Array
- RNA-Seq
- Flow Cytometry (SSEA-4, Tra 1-81)
- Infinium® Expanded Multi-Ethnic Genotyping Array (MEGA<sup>EX</sup>)

| Approval Date   | Quality Assurance Approval                                                                                        |
|-----------------|-------------------------------------------------------------------------------------------------------------------|
| 04-January-2017 | <p style="text-align: right;">3/8/2018</p> <p>X HEB<br/>HEB<br/>Quality Assurance<br/>Signed by Bruner, Haley</p> |

**Date Reported:** Friday, January 12, 2018  
**Cell Line:** UCSD114i-69-1-WB55346 13211  
**Passage#:** 28  
**Date of Sample:** 1/8/2018  
**Specimen:** Human iPSC  
**Results:** 46,XY,del(18)(q21.1q21.3)[20]

**Cell Line Gender:** Male  
**Reason for Testing:** lot release testing  
**Investigator:** [REDACTED], WiCell CDM



**Cell:** 11  
**Slide:** G03  
**Slide Type:** Karyotype  
  
**Total Counted:** 20  
**Total Analyzed:** 9  
**Total Karyogrammed:** 5  
**Band Resolution:** 450 - 600

**Interpretation:**

**This is an abnormal karyotype. There is an apparent interstitial deletion in the long (q) arm of chromosome 18 in twenty of twenty cells examined. This deletion appears to involve 18q21.2; this is a recurrent acquired abnormality in human pluripotent stem cell cultures. No other clonal abnormalities were found.**

**Completed by:** [REDACTED], CG(ASCP)  
**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 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](http://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:**

13211-STR

**Sample Name on Tube:** 13211-STR

67.6 ng/μL, (A260/280=1.83)

**Sample Type:** Cells

**Cell Count:** ~2 million cells

**Requestor:**

WiCell Research Institute

Quality Department

**Sample Date:** N/A

**Receive Date:** 01/16/18

**Assay Date:** 01/17/18

**File Name:** STR 180118 wmr

**Report Date:** 01/19/18

| 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 <a href="#">WiCell's Technical Support</a> . |
| 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 13211-STR cells submitted by WiCell QA dated and received on 01/16/18, this sample (Label on Tube: 13211-STR) defines the STR profile of the human stem cell line UCSD114i-69-1 comprising 27 allelic polymorphisms across the 15 STR loci analyzed.

**Interpretation:** No STR polymorphisms other than those corresponding to the human UCSD114i-69-1 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 13211-STR sample submitted corresponds to the UCSD114i-69-1 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<sub>RMB</sub>** Digitally Signed on 01/22/18

BA  
TRIP Laboratory, Molecular

**X<sub>WMR</sub>** Digitally Signed on 01/22/18

, 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 #: 17121102  
DATE RECEIVED: 14-Dec-17  
TEST INITIATED: 14-Dec-17  
TEST COMPLETED: 02-Jan-18

SAMPLE NAME / DESCRIPTION: UCSD033i-41-2 WB54901 13153  
UCSD037i-26-2 WB65027 13154  
UCSD039i-14-3 WB57650 13155  
UCSD040i-33-1 WB61158 13156  
UCSD041i-33-2 WB60323 13157  
UCSD043i-47-1 WB61824 13158  
UCSD045i-49-1 WB62417 13159  
UCSD046i-50-1 WB60581 13160  
UCSD047i-51-1 WB54782 13161  
UCSD049i-53-1 WB57867 13162  
UCSD114i-69-1 WB55346 13163  
UCSD150i-11-1 WB58932 13164  
UCSD154i-90-1 WB58798 13165  
UCSD164i-96-1 WB58713 13166  
UCSD180i-27-2 WB60894 13167  
UCSD204i-26-1 WB62522 13168  
UCSD216i-114-1 WB65031 13169  
UCSD220i-118-1 WB60019 13170  
iPS (Foreskin)-4 WB66699 13171  
WISC015i-SC7 DB66675 13172

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

## TEST RESULTS:

| # Tested | # Positives (Growth) | - Control   |
|----------|----------------------|-------------|
| 20       | 0                    | 4 Negatives |

## TEST SUMMARY:

| # Samples | Media Type | Volume (mL) | Incubation Temperature (° C) | Incubation Duration (Days) |
|-----------|------------|-------------|------------------------------|----------------------------|
| 20        | TSB        | 40          | 20-25                        | 15                         |
| 20        | FTG        | 40          | 30-35                        | 15                         |

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

METHOD VALIDATION / PD #: 000053

# Native Product Sterility Report



TEST METHODOLOGY: USP - Direct Transfer

COMMENTS: NA

REVIEWED BY

A handwritten signature in blue ink, consisting of several loops and a long horizontal stroke, positioned above a solid black horizontal line.

DATE

03 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

January 12, 2018

FORM SOP-QU-004.01

Version G Edition 02

Reported by: KR

Reviewed by: JB

BD Monolight 180

| # | Sample Name                 | Reading A |      | A Ave | Reading B |       | B Ave | Ratio B/A | Result   | Comments/Suggestions |
|---|-----------------------------|-----------|------|-------|-----------|-------|-------|-----------|----------|----------------------|
|   |                             | RLU1      | RLU2 |       | RLU1      | RLU2  |       |           |          |                      |
| 1 | UCSD114i-69-1-WB55346 13211 | 235       | 228  | 231.5 | 98        | 95    | 96.5  | 0.42      | Negative |                      |
| 2 | Positive (+) Control        | 340       | 347  | 343.5 | 17780     | 17867 | 17824 | 51.89     | Positive |                      |
| 3 | Negative (-) Control        | 556       | 577  | 566.5 | 66        | 59    | 62.5  | 0.11      | Negative |                      |

