

Thaw and Culture Details

| Cell Line Name | UCSD076i-1-7 | | | | | | |
|--|---|--|--|--|--|--|--|
| WiCell Lot Number | WB61578 | | | | | | |
| Provider | University of California, San Diego – Dr. Kelly Frazer | | | | | | |
| Banked By | WiCell | | | | | | |
| Thaw and Culture WiCell recommends thawing 1 vial into 3 wells of a 6 well plate. Recommendations | | | | | | | |
| Culture Platform | Feeder Independent | | | | | | |
| | Medium: mTeSR™1 | | | | | | |
| | Matrix: Matrigel® | | | | | | |
| Protocol WiCell Feeder Independent mTeSR™1 Protocol | | | | | | | |
| Passage Number | p31 These cells were cultured for 30 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 31. | | | | | | |
| Date Vialed | 22-March-2017 | | | | | | |
| Vial Label | UCSD076i-1-7 p31 WB61578 | | | | | | |
| 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 | | | | |
|--|---|---|--------------------|------------|--|--|--|--|
| | WiCell | SOP-CH-003 | Expected karyotype | See Report | | | | |
| Results: 47,XY,+Y[20] Karyotype by G-banding Interpretation: This is an abnormal karyotype. An extra copy of the Y chromosome is present twenty cells examined. No other clonal abnormalities were detected at the stated band level resolution. | | | | | | | | |
| Post-Thaw Viable Cell Recovery | WiCell | SOP-CH-305 | 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 | | | |
|---------------|---|--|--|--|
| 26-April-2017 | 7/29/2018 X JKG JKG Qualify Assurance Signed by Gay, Jenna | | | |



Chromosome Analysis Report: 072214

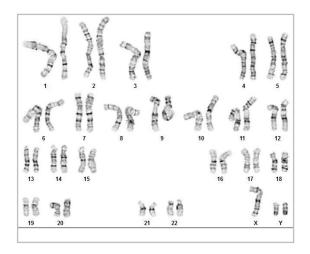
Date Reported: Friday, June 29, 2018
Cell Line: UCSD076i-1-7-WB61578 13672

Passage#: 31

Date of Sample: 6/22/2018 Specimen: Human IPS Results: 47,XY,+Y[20] Cell Line Sex: Male

Reason for Testing: lot release testing

Investigator: WiCell



Cell: 40 Slide: G02

Slide Type: Karyotype

Total Counted: 20
Total Analyzed: 8

Total Karyogrammed: 4
Band Resolution: 475 - 525

Interpretation:

This is an abnormal karyotype. An extra copy of the Y chromosome is present in all twenty cells examined. No other clonal abnormalities were detected at the stated band level of resolution.

Completed by: , CG(ASCP)

Reviewed and Interpreted by: , 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:

13672-STR

Sample Name on Tube: 13672-STR

66.7 ng/µL, (A260/280=1.93)

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 | | | | | | |
| TPOX | 6-13 | information has | | | | | | |
| D8S1179 | 7-18 | been redacted to protect donor | | | | | | |
| vWA | 10-22 | confidentiality. If | | | | | | |
| Amelogenin | X,Y | more information | | | | | | |
| Penta_D | 2.2, 3.2, 5, 7-17 | | | | | | | |
| CSF1PO | 6-15 | please, contact WiCell's Technical | | | | | | |
| 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 | | | | | | | |

<u>Results:</u> Based on the 13672-STR cells submitted by WiCell QA dated and received on 07/09/18, this sample (Label on Tube: 13672-STR) defines the STR profile of the human stem cell line UCSD076i-1-7 comprising 27 allelic polymorphisms across the 15 STR loci analyzed.

Interpretation: No STR polymorphisms other than those corresponding to the human UCSD076i-1-7 stem cell line were detected however, allelic imbalance (denoted by ** in table above) was observed at the Amelogenin loci and could be the result of chromosomal gains and/or losses in this cell line. 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 13672-STR sample submitted corresponds to the UCSD076i-1-7 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 ~2-5%.

X RMB Digitally Signed on 07/19/18

X WMR Digitally Signed on 07/19/18

BA
TRIP Laboratory, Molecular

Digitally Signed on 07/19/18

PhD, Director / Co-Director
UWHC Molecular Diagnostics Laboratory / UWSMPH TRIP Laboratory

Native Product Sterility Report



SAMPLE #:

17101392

WiCell DATE RECEIVED:

19-Oct-17

TEST INITIATED:

20-Oct-17

TEST COMPLETED:

03-Nov-17

SAMPLE NAME / DESCRIPTION:

504 S Rosa Rd, Rm 101

Madison, WI 53719

UCSD061i-65-1-WB60393 12989

MCW075i-U2096-WB66541 12990 STAN054i-149-2-DB30942 12991 UCSD076i-1-7-WB61578 12992 UCSD078i-1-9-WB60041 12993 UCSD020i-3-8-WB63471 12994 UCSD021i-3-9-WB63625 12995 UCSD181i-3-1-WB59924 12996

UCSD182i-3-2-WB60071 12997 UCSD038i-24-2-WB57681 12998

UNIQUE IDENTIFIER:

NA

PRODUCT REGISTRATION:

Human iPS cells

TEST RESULTS:

| | # Positives | |
|----------|-------------|-------------|
| # Tested | (Growth) | - Control |
| 10 | 0 | 2 Negatives |

TEST SUMMARY:

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

REFERENCE:

Processed according to LAB-003: Sterility Test Procedure

METHOD VALIDATION / PD #:

000053

TEST METHODOLOGY:

USP - Direct Transfer

COMMENTS:

NA

REVIEWED BY

soel

DATE 03 NOU17

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

Testing Performed by WiCell Lot Release Testing June 22, 2018

FORM SOP-QU-004.01 Version G Edition 02 Reported by: AP Reviewed by: JB BD Monolight 180

| | | Reading A A | | A | Read | ling B | В | Ratio | | |
|---|----------------------------|-------------|------|-------|-------|--------|-------|-------|----------|----------------------|
| # | Sample Name | RLU1 | RLU2 | Ave | RLU1 | RLU2 | Ave | B/A | Result | Comments/Suggestions |
| 1 | UCSD076i-1-7-WB61578 13672 | 190 | 181 | 185.5 | 75 | 77 | 76 | 0.41 | Negative | |
| 2 | Positive (+) Control | 490 | 497 | 493.5 | 24277 | 24371 | 24324 | 49.29 | Positive | |
| 3 | Negative (-) Control | 662 | 667 | 664.5 | 79 | 75 | 77 | 0.12 | Negative | |

