# Thaw and Culture Details

| | |
|---|---|
| Cell Line Name | **UCSD228i-NDC2-3** |
| WiCell Lot Number | **DB26795** |
| Provider | University of California, San Diego – Laboratory of Dr. Lawrence Goldstein |
| Banked By | University of California, San Diego – Laboratory of Dr. Lawrence Goldstein |
| Thaw and Culture Recommendations | Provider recommends thawing 1 vial into 5 wells of a 6 well plate. |
| Culture Platform | Feeder Dependent |
| | Medium: hESC Medium (KOSR) |
| | Matrix: MEF |
| Protocol | WiCell Feeder Dependent Protocol modified to plate MEFs at $1.28x10^6$ cells per 6-well plate. |
| Passage Number | p26<br>These cells were cultured for 25 passages prior to freeze and post reprogramming. The Provider adds +1 to the passage number to best represent the overall passage number of the cells at thaw. |
| Date Vialed | 24-July-2015 |
| Vial Label | iPS NDC2.3 p26<br>7/24/15 ch<br>thaw in 6 well |
| 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 | See Report |
| | ***Results:***<br>46,XY,del(1)(q41),add(10)(q26)[16]/46,XY,del(1)(q41),add(10)(q26),add(18)(q21.1)[2]/46,XY[1]<br>Nonclonal Findings: 46,XY,del(1)(q41),add(10)(q26),dup(12)(p11.2p13)<br>***Interpretation:*** This is an abnormal karyotype with two aberrant clones.<br>Nineteen of twenty cells examined show a deletion of the long (q) arm of chromosome 1, and additional material of unknown origin ("add") on the long (q) arm of chromosome 10. A clone of two cells shows additional material on the long (q) arm of chromosome 18 in addition to the del(1q) and add(10q). No other clonal abnormalities were found. There is one nonclonal finding, listed above. Nonclonal findings likely result from technical artifact, but may be due to a developing clonal abnormality or to low-level mosaicism. | | | |
| Post-Thaw Viable Cell Recovery | WiCell | SOP-CH-305 | Recoverable attachment after passage | Pass |
| Identity by STR | UW Translational Research Initiatives in Pathology Laboratory | PowerPlex 16 HS System by Promega | Consistent with STR profile of donor material | Pass |
| Sterility | Steris | ST/07 | Negative | Pass |
| Mycoplasma | WiCell | SOP-QU-004 | Negative | Pass |

# Testing Reported by Provider

For more information, publication and dbGaP links, where available, are provided on the cell line specific web page on the WiCell website.

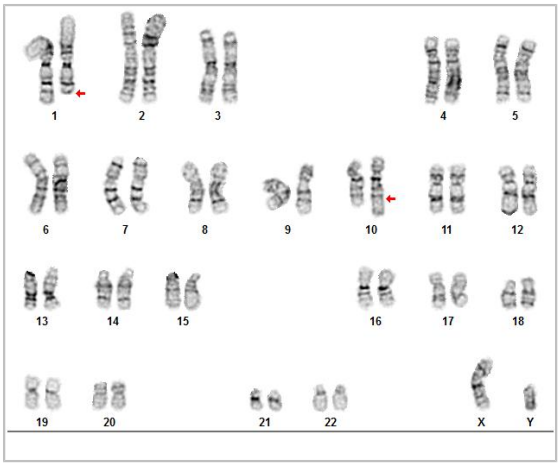
| Test Description | Method | Result |
|---|---|---|
| Genetic Analysis | G-Band Karyotype | Maintained euploid karyotype |
| Pluripotency | FACS | Expressed the pluripotency-associated proteins NANOG and TRA1-81.<br>See the publication for Mean % TRA1-81. |
| Teratoma | Injected into nude rats | Differentiated into cells of ectodermal, mesodermal, and endodermal lineages in vitro. |

| Approval Date | Quality Assurance Approval |
|---|---|
| 30-June-2016 | 11/15/2019<br>X JKG<br>JKG<br>Quality Assurance<br>Signed by: Gay, Jenna |

# Chromosome Analysis Report: 067436

**Date Reported:** Friday, August 18, 2017
**Cell Line Gender:** Male
**Cell Line:** UCSD228i-NDC2-3-DB26795 12686
**Reason for Testing:** lot release testing
**Passage#:** 26
**Date of Sample:** 8/7/2017
**Investigator:** [redacted], WiCell CDM
**Specimen:** Human IPS
**Results:** 46,XY,del(1)(q41),add(10)(q26)[16]/46,XY,del(1)(q41),add(10)(q26),add(18)(q21.1)[2]/46,XY[1]

**Nonclonal Findings:** 46,XY,del(1)(q41),add(10)(q26),dup(12)(p11.2p13)




**Cell:** 39
**Slide:** G02
**Slide Type:** Karyotype

**Total Counted:** 20
**Total Analyzed:** 8
**Total Karyogrammed:** 5
**Band Resolution:** 425 - 475

**Interpretation:**

**This is an abnormal karyotype with two aberrant clones.**

**Nineteen of twenty cells examined show a deletion of the long (q) arm of chromosome 1, and additional material of unknown origin ("add") on the long (q) arm of chromosome 10. A clone of two cells shows additional material on the long (q) arm of chromosome 18 in addition to the del(1q) and add(10q). No other clonal abnormalities were found.**

**There is one nonclonal finding, listed above. Nonclonal findings likely result from technical artifact, but may be due to a developing clonal abnormality or to low-level mosaicism.**

**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".*

# Short Tandem Repeat Analysis

School of Medicine and Public Health
UNIVERSITY OF WISCONSIN-MADISON
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:**
12686-STR
**Sample Name on Tube:** 12686-STR
110.6 ng/µL, (A260/280=1.98)
**Sample Type:** Cells
**Cell Count:** ~2 million cells

**Requestor:**
WiCell Research Institute
Quality Department

**Sample Date:** N/A
**Receive Date:** 08/24/17
**Assay Date:** 08/08/17
**File Name:** 170809 STR TCS
**Report Date:** 08/14/17

| 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 12686-STR cells submitted by WiCell QA dated and received on 08/07/17, this sample (Label on Tube: 12686-STR) defines the STR profile of the human stem cell line UCSD228i-NDC2-3 comprising 29 allelic polymorphisms across the 15 STR loci analyzed.**

**Interpretation:** **No STR polymorphisms other than those corresponding to the human UCSD228i-NDC2-3 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 12686-STR sample submitted corresponds to the UCSD228i-NDC2-3 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 08/16/17**

[redacted]
*TRIP Laboratory, Molecular*

X *WMR* **Digitally Signed on 08/16/17**

[redacted] *PhD, Director / Co-Director*
*UWHC Molecular Diagnostics Laboratory / UWSMPH TRIP Laboratory*

# Sterility Report

**Biotest Laboratories, Inc.**
*Making life-saving products possible*

WiCell Research Institute, Inc.
WiCell Quality Assurance
504 South Rosa Road, Room 101
Madison, WI 53719

BIOTEST SAMPLE # 16100501

VALIDATION # NG

TEST PURPOSE NG

| | |
|---|---|
| PRODUCT | R366.4 WB47080 11873, MIN08i-33114.B WB47099 11874, WC021i-SMA-GM15 WB47071 11875, WC022i-SMA-GM77 WB47072 11876, WC023i-SMA-GM232 WB47173 11877, UCSD236i-APP1-1 DB26819 11878, UCSD224i-NDC1-2 DB26664 11879, UCSD225i-NDC1-3 DB26676 11880, UCSD227i-NDC2-2 DB26792 11881, UCSD228i-NDC2-3 DB26795 11882 |
| PRODUCT LOT | NA |
| STERILE LOT | NA |
| STERILIZATION LOT | NA |
| STERILIZATION DATE | NA |
| STERILIZATION METHOD | NA |
| SAMPLING BLDG / ROOM | NA |

| | |
|---|---|
| BI LOT | NA |
| BI EXPIRATION DATE | NA |
| DATE RECEIVED | 2016-10-06 |
| TEST INITIATED | 2016-10-21 |
| TEST COMPLETED | 2016-11-04 |

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

Ten (10) products were each divided between 40 mL TSB and 40 mL FTG. The samples were then cultured at 20-25 C and 30-35 C respectively and were monitored for a minimum of 14 days.

☒ USP
☐ BI Manufacturers Specifications
☐ Other

| RESULTS | # POSITIVES | # TESTED | POSITIVE CONTROL | NEGATIVE CONTROL |
|---|---|---|---|---|
| Sterile | 0 | 10 | NA | 2 Negatives |

COMMENTS NA

REVIEWED BY Elnsad DATE 09NOV16

# Mycoplasma Detection Assay Report

Testing Performed by WiCell

Lot Release Testing

August 3, 2017

FORM SOP-QU-004.01
Version F 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 | UCSD228i-NDC2-3-DB26795 12686 | 354 | 359 | 356.5 | 177 | 187 | 182 | 0.51 | Negative | |
| 2 | Positive (+) Control | 344 | 392 | 368 | 29366 | 29485 | 29426 | 79.96 | Positive | |
| 3 | Negative (-) Control | 662 | 670 | 666 | 81 | 77 | 79 | 0.12 | Negative | |