

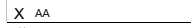


## Thaw and Culture Details

Cell Line Name	<b>iPS(Foreskin)-4</b>
WiCell Lot Number	<b>WB66699</b>
Parent Material	iPS(Foreskin)-4-WB0038
Provider	University of Wisconsin – Laboratory of Dr. James Thomson
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	p27 These cells were cultured for 26 passages prior to freeze, at least 12 of them on mTeSR™1/Matrigel®. WiCell adds +1 to the passage number to best represent the overall passage number of the cells at thaw.
Date Viald	05-December-2017
Vial Label	iPS(Foreskin)-4 p27 WB66699
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.

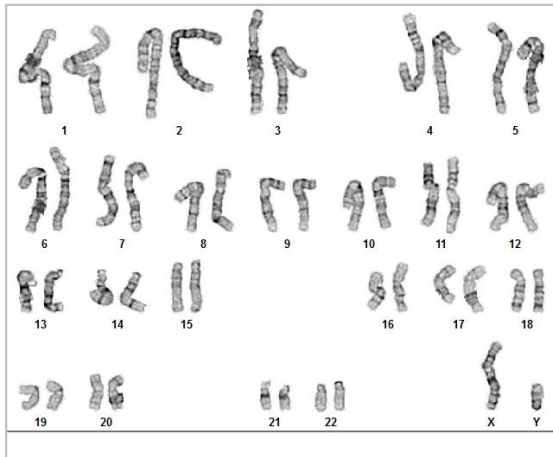
## Testing Performed by WiCell

Test Description	Test Provider	Test Method	Test Specification	Result
Karyotype by G-banding	WiCell	SOP-CH-003	Expected karyotype	Pass
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	Consistent with STR profile of deposited cell line	Pass
Sterility	Steris	ST/07	Negative	Pass
Mycoplasma	WiCell	SOP-QU-004	Negative	Pass

Approval Date	Quality Assurance Approval
17-January-2018	<div style="text-align: right; font-size: small;">7/14/2020</div>  <div style="font-size: x-small; margin-top: 2px;">AA Quality Assurance Signed by: Armitz, Andy</div>

**Date Reported:** Friday, December 22, 2017  
**Cell Line:** iPS(Foreskin)-4-WB66699 13150  
**Passage#:** 27  
**Date of Sample:** 12/19/2017  
**Specimen:** Human IPS  
**Results:** 46,XY

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



**Cell:** 4  
**Slide:** G03  
**Slide Type:** Karyotype

**Total Counted:** 20  
**Total Analyzed:** 8  
**Total Karyogrammed:** 4  
**Band Resolution:** 475 - 575

### Interpretation:

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

**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.*

**Sample Report:**

13150-STR

**Sample Name on Tube:** 13150-STR

91.3 ng/μL, (A260/280=1.91)

**Sample Type:** Cells**Cell Count:** ~2 million cells**Requestor:**

WiCell Research Institute

Quality Department

**Sample Date:** N/A**Receive Date:** 01/02/18**Assay Date:** 01/04/18**File Name:** STR 180105 wmr**Report Date:** 01/10/18

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 13150-STR cells submitted by WiCell QA dated and received on 01/02/18, this sample (Label on Tube: 13150-STR) exactly matches the STR profile of the human stem cell line iPS(Foreskin)-4 comprising 27 allelic polymorphisms across the 15 STR loci analyzed.

**Interpretation:** No STR polymorphisms other than those corresponding to the human iPS(Foreskin)-4 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 13150-STR sample submitted corresponds to the iPS(Foreskin)-4 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%.



Digitally Signed on 01/11/18

BA  
TRIP Laboratory, Molecular



Digitally Signed on 01/11/18

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

December 21, 2017

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	iPS(Foreskin)-4-WB66699 13150	216	218	217	100	92	96	0.44	Negative	
2	Positive (+) Control	395	377	386	15569	15667	15618	40.46	Positive	
3	Negative (-) Control	594	614	604	67	66	66.5	0.11	Negative	

