

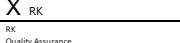


Thaw and Culture Details

Cell Line Name	WC032i-6007-1
WiCell Lot Number	WB66540
Provider	University of Wisconsin – Laboratory of Anita Bhattacharyya
Banked By	WiCell
Thaw and Culture Recommendations	WiCell recommends thawing 1 vial into 3 wells of a 6 well plate.
	Feeder Independent
	Medium: mTeSR™1
	Matrix: Matrigel®
Protocol	WiCell Feeder Independent mTeSR™1 Protocol
Passage Number	p10 These cells were cultured for 9 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	18-August-2017
Vial Label	WC032i-60-07-1 p10 WB66540
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	Defines profile	Pass
Sterility	Steris	ST/07	Negative	Pass
Mycoplasma	WiCell	SOP-QU-004	Negative	Pass

Approval Date	Quality Assurance Approval
21-September-2017	<div style="text-align: right;">9/25/2017</div> <div style="text-align: center;">  <small>ERIK Quality Assurance Signed by: Kremers, Erik</small> </div>

Date Reported: Tuesday, September 12, 2017

Cell Line: WC032i-6007-1-WB66540 12780

Passage#: 10

Date of Sample: 8/29/2017

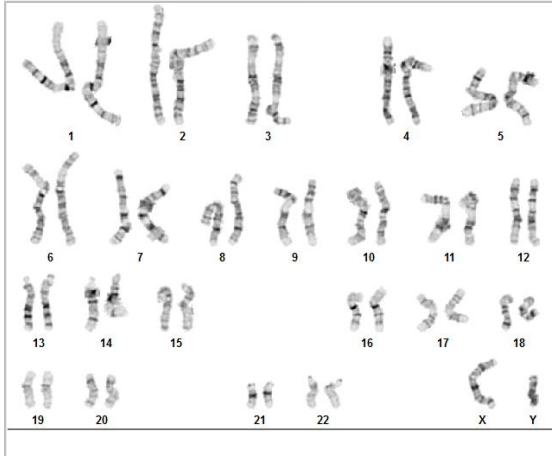
Specimen: Human IPS

Results: 46,XY

Cell Line Gender: Male

Reason for Testing: lot release testing

Investigator: Katie Remondini, WiCell CDM



Cell: 31

Slide: 3

Slide Type: Karyotype

Total Counted: 20

Total Analyzed: 8

Total Karyogrammed: 4

Band Resolution: 400 - 550

Interpretation:

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

Completed by: Erik McIntire, CG(ASCP)

Reviewed and Interpreted by: Kathy Richkind, 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.

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Short Tandem Repeat Analysis



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:

12780-STR
Sample Name on Tube: 12780-STR
54.8 ng/μL, (A260/280=2.04)
Sample Type: Cells
Cell Count: ~2 million cells

Requestor:

WiCell Research Institute
Quality Department

Sample Date: N/A

Receive Date: 09/05/17
Assay Date: 09/12/17
File Name: 170913 STR WMR
Report Date: 09/15/17

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	21.2,22
TPOX	6-13	8,9
D8S1179	7-18	12,13
vWA	10-22	16,18
Amelogenin	X,Y	X,Y
Penta_D	2.2, 3.2, 5, 7-17	9,12
CSF1PO	6-15	9,10
D16S539	5, 8-15	9,11
D7S820	6-14	11,11
D13S317	7-15	9,12
D5S818	7-16	10,12
Penta_E	5-24	5,17
D18S51	8-10, 10.2, 11-13, 13.2, 14-27	14,16
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	28,30
TH01	4-9,9.3,10-11,13.3	9,9.3
D3S1358	12-20	15,17

Results: Based on the 12780-STR cells submitted by WiCell QA dated and received on 09/05/17, this sample (Label on Tube: 12780-STR) defines the STR profile of the human stem cell line WC032i-6007-1 comprising 29 allelic polymorphisms across the 15 STR loci analyzed.

Interpretation: No STR polymorphisms other than those corresponding to the human WC032i-6007-1 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 12780-STR sample submitted corresponds to the WC032i-6007-1 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 09/15/17

Rebecca M. Baus
TRIP Laboratory, Molecular

X *WMR*
Digitally Signed on 9/15/17

William M. Rehrauer, 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 #: 17081530
DATE RECEIVED: 24-Aug-17
TEST INITIATED: 25-Aug-17
TEST COMPLETED: 08-Sep-17

SAMPLE NAME / DESCRIPTION: WA09-RB66490 12757
WA09-RB66492 12758
WA09-RB66493 12759
WC026i-5807-3 WB66538 12760
WC032i-6007-1-WB66540 12761
WC033i-6007-2-WB66539 12762
STAN008i-165-1-DB31100 12763
STAN009i-165-2-DB31110 12764
STAN053i-149-1-DB30924 12765
STAN001i-047-1-DB31118 12766

UNIQUE IDENTIFIER: NA
PRODUCT REGISTRATION: Human iPS cells

TEST RESULTS:

# Tested	# Positives (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



Mycoplasma Detection Assay Report

Testing Performed by WiCell

Lot Release Testing

August 28, 2017

FORM SOP-QU-004.01

Version F Edition 02

Reported by: KR

Reviewed by: JB

Berthold Flash n' Glo 539

#	Sample Name	Reading A			Reading B			Ratio B/A	Result	Comments/Suggestions
		RLU1	RLU2	Ave	RLU1	RLU2	Ave			
1	WC032i-6007-1-WB66540 12780	83	81	82	32	30	31	0.38	Negative	
2	Positive (+) Control	165	166	165.5	17611	17643	17627	106.51	Positive	
3	Negative (-) Control	257	263	260	36	30	33	0.13	Negative	

