




Certificate of Analysis

Thaw and Culture Details


Cell Line Name	WA09	
WiCell Lot Number	RB68234	
Parent Material	WIC-WA09-MB-004	
Provider/Client	University of Wisconsin – Dr. James Thomson	
Banked By	WiCell	
Thaw and Culture Recommendations	WiCell recommends thawing 1 vial into 4 wells of a 6 well plate using mTeSR™ 1 and Matrigel®.	
Protocol	WiCell Feeder Independent Pluripotent Stem Cell Protocol	
Culture Platform Prior to Freeze	Medium: mTeSR™ 1	Matrix: Matrigel®
Passage Number	p30 Cells were cultured for 29 passages prior to freeze. Plated cells at thaw should be labeled passage 30.	
Date Viald	25-January-2024	
Vial Label	WA09 p30 RB68234 Store at -135C or colder Made in United States Research Use Only 	
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.	



Certificate of Analysis

Results

Test Description	Test Provider	Test Method	Test Specification	Result
Karyotype	WiCell	G-T-L Banding performed on 20 metaphase cells	Expected karyotype	See Report
	Results: 46,XX Interpretation: This is a normal karyotype; no clonal abnormalities were detected at the stated band level of resolution.			
Post-Thaw Viable Cell Recovery	WiCell	Thaw using specified Thaw & Culture Recommendations	≥ 15 Undifferentiated Colonies prior to passage, ≤ 30% Differentiation prior to passage, and recoverable attachment after passage	Pass
Identity by STR	WiCell	PowerPlex 16 HS System by Promega™	Consistent with STR profile of deposited cell line	See Report
Mycoplasma	WiCell	PCR	Amplification of mycoplasma specific DNA detected with negative result	Pass
Sterility	Steris	Native Product Direct Transfer using FTM and TSB (ST/07)	Negative for growth following 14 days of culture	Pass

Approval Date	WiCell Quality Assurance Approval
05-April-2024	 JKG WiCell Quality Assurance Signed by: Gay, Jenina 4/5/2024

Date Reported: February 23, 2024

Cell Line: WA09-RB68234

Submitted Passage #: 31

Date of Sample: 2/9/2024

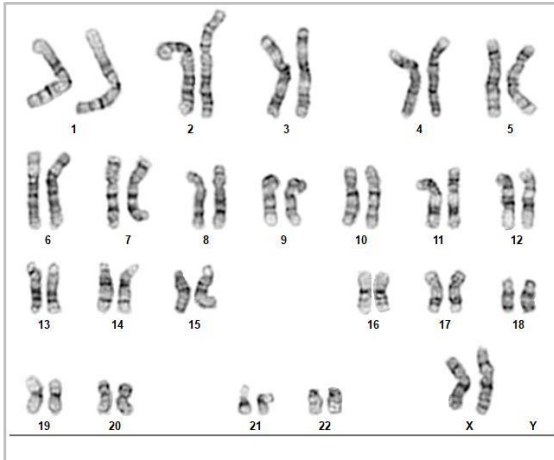
Specimen: Human ESC

Results: 46,XX

Cell Line Sex: Female

Reason for Testing: LOT_RELEASE

Investigator: WiCell Stem Cell Bank, WiCell



Cell: 5

Slide: G02

Slide Type: Karyotype

Total Counted: 20

Total Analyzed: 8

Total Karyogrammed: 4

Band Resolution: 350 - 450

Interpretation:

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

Completed by: Pam Mill

Reviewed and Interpreted by: Vanessa Horner, PhD, FACMG

For internal use only

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

Requestor: WiCell Stem Cell Bank, WiCell

Samples Received: 09Feb24, 16Feb24

STR Amplification Date: 20Feb24

Form SOP-89.01

Version 12.0

Sample Name	JHU191i-WB68245 p15	UCSD234i-SAD2-3-WB68246 p38	WA09-RB68234 p31	WA09-RB68235 p31
WiCell CTR No. ¹	100760	100759	100682	100681
FGA	Identifying information has been redacted to protect donor confidentiality. If more information is required, please contact info@wicell.org		26, 28	Identifying information has been redacted to protect donor confidentiality. If more information is required, please contact info@wicell.org
TPOX			10, 11	
D8S1179			8, 14	
vWA			17, 17	
Amelogenin			X, X	
Penta_D			9, 13	
CSF1PO			11, 11	
D16S539			12, 13	
D7S820			9, 11	
D13S317			9, 9	
D5S818			11, 12	
Penta_E			11, 14	
D18S51			13, 13	
D21S11			30, 30	
TH01	9.3, 9.3			
D3S1358	13, 16			
Allelic Polymorphisms	27	27	24	24
Matches*	76163	90756, 47741, 69242, 67449	See matches comment	See matches comment
Comments				

**Note: The STR profile of the following sample is a 100% match for the given sample/samples unless otherwise specified.*

¹ CTR No.: Characterization Test Request Number; also known as a laboratory accessioning number.



Short Tandem Repeat

Requestor: WiCell Stem Cell Bank, WiCell

Samples Received: 09Feb24, 16Feb24

STR Amplification Date: 20Feb24

Form SOP-89.01

Version 12.0

Assay Description: STR analysis is performed using the PowerPlex 16 HS System by Promega™. Results are reported as 13 CODIS STR markers, Amelogenin for gender determination and two low-stutter, highly discriminating pentanucleotide STR markers.

Results: The genotypic profiles comprise a range of 24-27 allelic polymorphisms across the 15 STR loci analyzed.

Interpretation: 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. These results suggests that the cells submitted correspond to the cell lines as named and were not contaminated with any other human 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 cell lines is ~2-4%.

Matches: Samples 100681 and 100682 are a 100% match to each other and to 99356, 99312, 97827, 97437, 97371, 97171, 96184, 96183, 95823, 95822 and additional profiles. Additional matches can be provided upon request.

2/29/2024	2/29/2024	2/29/2024
<p>X Michael Mussar</p> <hr/> <p>Tech #1 Characterization Signed by: Mussar, Michael</p>	<p>X Amber Kuhn</p> <hr/> <p>Tech #2 Characterization Signed by: Kuhn, Amber</p>	<p>X Ryen Smith</p> <hr/> <p>QA Review Quality Assurance Signed by: Smith, Ryen</p>

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Mycoplasma Assay Report

PCR-based assay performed by WiCell
WiCell Stem Cell Bank, WiCell
14Feb24

Form SOP-83.01
Version 6.0

Sample Name	Result	Interpretation
WA09-RB68235 p31 (100681)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
WA09-RB68234 p31 (100682)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
Positive (+) Control	Positive	
Negative (-) Control	Negative	

Assay Description
Sample is tested for presence of mycoplasma using EZ-PCR™ Mycoplasma Detection Kit (Sartorius).

2/14/2024	2/14/2024	2/15/2024
<p>X John Raff</p> <hr/> <p>Tech #1 Characterization Signed by: Raff, John</p>	<p>X Amber Kuhn</p> <hr/> <p>Tech #2 Characterization Signed by: Kuhn, Amber</p>	<p>X Dawn Graham</p> <hr/> <p>QA Review Quality Assurance Signed by: Graham, Dawn</p>

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A gel image is available upon request.

Native Product Sterility Report



Accounting@wicell.org
504 S Rosa Road, Rm 101
Madison, WI 53719

SAMPLE #: 24030270
DATE RECEIVED: 07-Mar-24
TEST INITIATED: 07-Mar-24
TEST COMPLETED: 21-Mar-24

SAMPLE NAME / DESCRIPTION: WA09-RB68234
WA09-RB68235
UCSD231i-SAD1-3-WB68241
UCSD234i-SAD2-3-WB68246
CBiPS-E12C1-PCBC-WB68252
JHU191i-WB68245
UCSD087i-6-4-WB68251
CBiPS-6.2-PCBC-WB68269
hIPSC-Di21-c2-4-4-WB68256
STAN222i-509C2-WB68276
WC032i-6007-1-WB68273
iPS DF19-9-7T-WB68268
STAN173i-368C2-DB37978
STAN305i-865C2-DB44177
STAN306i-865C3-DB44182
STAN254i-647C3-DB44629
STAN253i-647C1-DB44626
STAN107i-121C2-DB35873
STAN263i-703C1-DB35850
STAN264i-703C2-DB35853

UNIQUE IDENTIFIER: N/A

TEST RESULTS:

# Tested	# Positives (Growth)	- Control
20	0	2 Negatives

TEST SUMMARY:

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

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

PD #: 000053

TEST METHODOLOGY: USP - Direct Transfer

Native Product Sterility Report



COMMENTS: Sample# 24030270

AUTHORIZED BY

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

DATE

28 MAR 2024

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. Results applied to samples as received.