



# Certificate of Analysis

## Thaw and Culture Details

Cell Line Name	<b>WA01</b>	
WiCell Lot Number	<b>WB68078</b>	
Provider/Client	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 using mTeSR™1 and Cultrex®	
Protocol	WiCell Feeder Independent Pluripotent Stem Cell Protocol	
Culture Platform Prior to Freeze	Medium: mTeSR™1	Matrix: Matrigel®
Passage Number	p23 Cells were cultured for 22 passages prior to freeze. Plated cells at thaw should be labeled passage 23.	
Date Vialied	18-January-2023	
Vial Label	WA01 p23 WB68078	
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
	<b>Results:</b> 46,XY <b>Interpretation:</b> 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
26-April-2023	<p style="text-align: right;">4/26/2023</p> <p>X HEB HEB WiCell Quality Assurance Signed by Bruner, Haley</p>

**Date Reported:** Friday, February 24, 2023

**Cell Line:** WA01-WB68078

**Submitted Passage #:** 23

**Date of Sample:** 2/14/2023

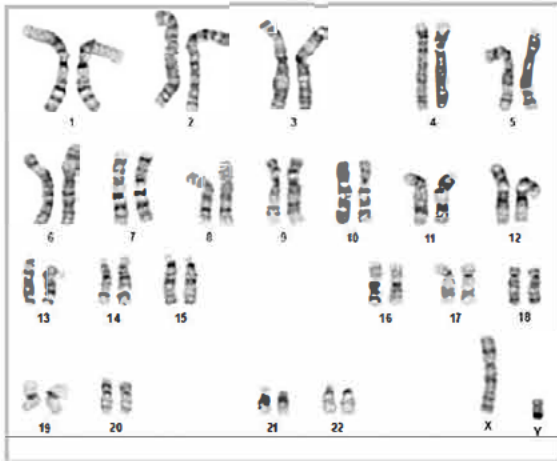
**Specimen:** Human ESC

**Results:** 46,XY

**Cell Line Sex:** Male

**Reason for Testing:** LOT\_RELEASE

**Investigator:** WiCell Stem Cell Bank, WiCell



**Cell:** 32

**Slide:** G02

**Slide Type:** Karyotype

**Total Counted:** 20

**Total Analyzed:** 8

**Total Karyogrammed:** 4

**Band Resolution:** 425 - 475

**Interpretation:**

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

**Completed by:** Jennifer Pecos, CG(ASCP)

**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](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.*



# Short Tandem Repeat

Requestor: WiCell Stem Cell Bank, WiCell  
 Samples Received: 28Mar23, 29Mar23, 31Mar23  
 STR Amplification Date: 05Apr23

Form SOP-89.01  
 Version 9.0

Sample Name	WA01- WB68078 p23	WC029i-5907- 1-WB68080 p12	WA01- WB68079 p23	
WiCell CTR No. <sup>1</sup>	96463	96464	96488	96536
FGA	20, 24	Identifying information has been redacted to protect donor confidentiality. If more information is required, please contact <a href="mailto:info@wicell.org">info@wicell.org</a>		
TPOX	8, 11			
D8S1179	12, 13			
vWA	15, 17			
Amelogenin	X, Y			
Penta_D	10, 13			
CSF1PO	12, 13			
D16S539	9, 13			
D7S820	8, 12			
D13S317	8, 11			
D5S818	9, 11			
Penta_E	10, 12			
D18S51	17, 18			
D21S11	28, 32.2			
TH01	9.3, 9.3			
D3S1358	15, 15			
Allelic Polymorphisms	28	29	28	24
Matches*	See Matches Comment	67700, 68062, 67799	See Matches Comment	96214
Comments				

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

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



# Short Tandem Repeat

Form SOP-89.01

Version 9.0

Requestor: WiCell Stem Cell Bank, WiCell  
Samples Received: 28Mar23, 29Mar23, 31Mar23  
STR Amplification Date: 05Apr23

**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 24-29 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 96463 and 96488 are exact 100% matches to each other and to 94744, 94743, 93806, 86550, 86570, 82881, 82204, 82128, 82047, 80875 and additional profiles. Additional matches can be provided upon request.

4/10/2023	4/12/2023	4/13/2023
<p><b>X</b> Kaylie Petersen</p> <hr/> <p>Tech #1 Characterization Signed by: Petersen, Kaylie</p>	<p><b>X</b> Amber Kuhn</p> <hr/> <p>Tech #2 Characterization Signed by: Kuhn, Amber</p>	<p><b>X</b> Ryen Smith</p> <hr/> <p>QA Review Quality Assurance Signed by: Smith, Ryen</p>

*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. Raw data is available upon request.*



# Mycoplasma Assay Report

PCR-based assay performed by WiCell  
WiCell Stem Cell Bank, WiCell  
04Apr23

Form SOP-83.01  
Version 5.0

Sample Name	Result	Interpretation
WA01-WB68079 p23 (96488)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
WC029i-5907-1-WB68080 p12 (96464)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
WA01-WB68078 p23 (96463)	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).

4/4/2023	4/6/2023	4/6/2023
<b>X</b> Michael Mussar <hr/> Tech #1 Characterization Signed by: Mussar, Michael	<b>X</b> Amber Kuhn <hr/> Tech #2 Characterization Signed by: Kuhn, Amber	<b>X</b> Andy Arntz <hr/> QA Review Quality Assurance Signed by: Arntz, Andy

*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.*

*A gel image is available upon request.*

# Native Product Sterility Report



WiCell  
504 S Rosa Road, Rm 101  
Madison, WI 53719

SAMPLE #: 23030143  
DATE RECEIVED: 02-Mar-23  
TEST INITIATED: 15-Mar-23  
TEST COMPLETED: 29-Mar-23

SAMPLE NAME / DESCRIPTION: WA01-WB68078  
WA01-WB68079  
WC029i-5907-1-WB68080  
WA09-WB68081  
PENN143i-M10-11-DB34868  
PENN152i-M18-1-DB36652  
PENN153i-M4-10-DB35164  
PENN159i-M14-4-DB36347  
PENN161i-M10-5-DB35011  
PENN162i-M14-11-DB36340

UNIQUE IDENTIFIER: N/A

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

PD #: 000053

TEST METHODOLOGY: USP - Direct Transfer

COMMENTS: NA

AUTHORIZED BY Jae Vang

DATE 03 APR 23

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.