



Certificate of Analysis

Thaw and Culture Details

Cell Line Name	WA09	
WiCell Lot Number	WB68167	
Parent Material	WA09-WB66595	
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: Cultrex®
Passage Number	p25 Cells were cultured for 24 passages prior to freeze and post reprogramming. Plated cells at thaw should be labeled passage 25.	
Date Viald	15-September-2023	
Vial Label	WA09 p25 WB68167	
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
10-January-2024	<div>1/10/2024</div> <div>X HEB HEB WiCell Quality Assurance Signed by: Bruner, Haley</div>

Date Reported: Friday, November 3, 2023

Cell Line: WA09-WB68167

Submitted Passage #: 26

Date of Sample: 10/26/2023

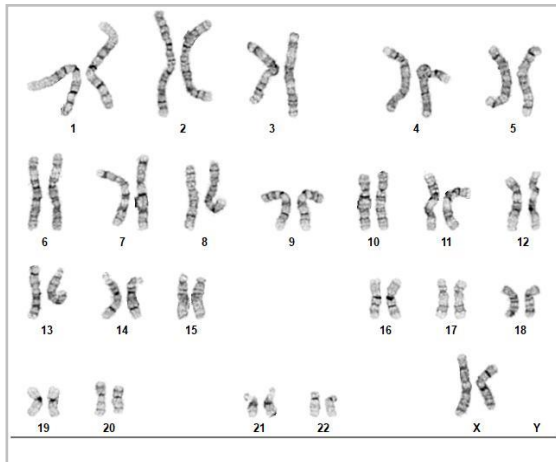
Specimen: Human ESC

Results: 46,XX

Cell Line Sex: Female

Reason for Testing: LOT_RELEASE

Investigator: WiCell Stem Cell Bank, WiCell



Cell: 8

Slide: G02

Slide Type: Karyotype

Total Counted: 20

Total Analyzed: 8

Total Karyogrammed: 4

Band Resolution: 450 - 500

Interpretation:

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

Completed by: Korrine Thornell, CG(ASCP)

Reviewed and Interpreted by: Xiangqiang Shao, PhD, DABMGG

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: 24Oct23, 26Oct23, 27Oct23
STR Amplification Date: 07Nov23

Form SOP-89.01
Version 11.0

Sample Name	UCSD012i-5-5-WB68191 p27	WA09-WB68167 p26	UCSD087i-6-4-WB68192 p20	WIC-WA09-MB-005 p28	STAN241i-558C4-WB68153 p17	STAN240i-558C3-WB68154 p17
WiCell CTR No. ¹	99362	99356	99355	99312	99311	99310
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	24	29	24	29	29
Matches*	72377	See Matches Comment	72176	See Matches Comment	99310	99311
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: 24Oct23, 26Oct23, 27Oct23
STR Amplification Date: 07Nov23

Form SOP-89.01
Version 11.0

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 24-29 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 99356 and 99312 are a 100% match to each other and to 97827, 97437, 97371, 97171, 96184, 96183, 95823, 95822, 93654, 93595 and additional profiles. Additional matches can be provided upon request.

11/14/2023	11/14/2023	11/14/2023
X Amber Kuhn	X Anna Lisa Larson	X Dawn Graham
Tech #1	Tech #2	QA Review
Characterization	Characterization	Quality Assurance
Signed by: Kuhn, Amber	Signed by: Larson, Anna Lisa	Signed by: Graham, Dawn

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Mycoplasma Assay Report

PCR-based assay performed by WiCell
WiCell Stem Cell Bank, WiCell
01Nov23

Form SOP-83.01
Version 5.0

Sample Name	Result	Interpretation
STAN240i-558C3-WB68154 p17 (99310)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
STAN241i-558C4-WB68153 p17 (99311)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
WIC-WA09-MB-005 p28 (99312)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
UCSD087i-6-4-WB68192 p20 (99355)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
WA09-WB68167 p26 (99356)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
UCSD012i-5-5-WB68191 p27 (99362)	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).

11/2/2023	11/2/2023	11/2/2023
X John Raff	X Kaylie Petersen	X Dawn Graham
Tech #1 Characterization Signed by: Raff, John	Tech #2 Characterization Signed by: Petersen, Kaylie	QA Review Quality Assurance Signed by: Graham, Dawn

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A gel image is available upon request.

Native Product Sterility Report



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

SAMPLE #: 23120703
DATE RECEIVED: 15-Dec-23
TEST INITIATED: 15-Dec-23
TEST COMPLETED: 29-Dec-23

SAMPLE NAME / DESCRIPTION: UCSD087i-6-4-WB68222
WA-AICS-0046-051-WB68220
WA-AICS-0053-016-WB68221
WA-AICS-0058-067-WB68225
WA-AICS-0060-027-WB68223
WA-AICS-0023-WB68203
PENNO29i-752-3-WB68199
H1 SOX2-Cherry-2A-C.2-WB68198
STAN249i-617C2-WB68196
H1 SOX2-Cherry-2A-C.2-WB68197
UCSD012i-5-5-WB68191
UCSD087i-6-4-WB68192
WA09-WB68167
WA09-WB68168
WA09-WB68169

UNIQUE IDENTIFIER: N/A

TEST RESULTS:

# Tested	# Positives (Growth)	- Control
15	0	2 Negatives

TEST SUMMARY:

# Samples	Media Type	Volume (mL)	Incubation Temperature (° C)	Incubation Duration (Days)
15	TSB	40	20-25	14
15	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 #23120703

AUTHORIZED BY _____

A handwritten signature in blue ink, consisting of a circular loop followed by a long horizontal stroke.

DATE 03 JAN 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.