Certificate of Analysis

Thaw and Culture Details

Cell Line Name	**WA09**	
WiCell Lot Number	**WB68404**	
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	p27 Cells were cultured for 26 passages prior to freeze and post reprogramming, 3 of them in mTeSR/Matrigel. Plated cells at thaw should be labeled passage 27.	
Date Vialed	02-MAY-2024	
Vial Label	WA09 p27 WB68404 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

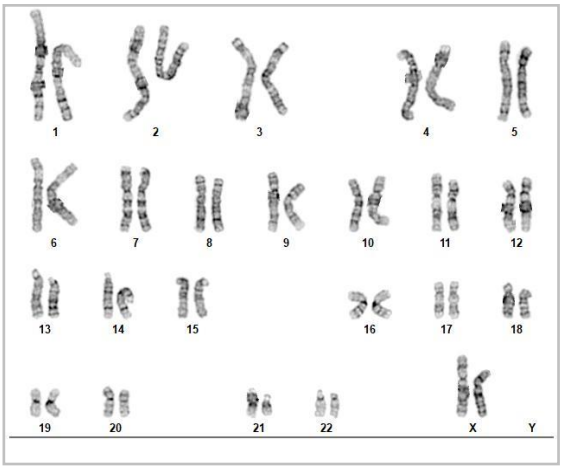
Test Description	Test Provider	Test Method	Test Specification	Result
Karyotype	WiCell	G-T-L Banding performed on 20 metaphase cells	Expected karyotype	See Report
	Results: 46,XX ***Interpretation:*** This is a normal karyotype; no clonal abnormalities were detected at the stated band level of resolution.			
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
11-JULY-2024	7/11/2024 X HEB HEB WiCell Quality Assurance Signed by: Bruner, Haley

Chromosome Analysis Report: 102296

Date Reported: May 31, 2024
Cell Line: WA09-WB68404
Submitted Passage #: 28
Date of Sample: 5/28/2024
Specimen: Human ESC
Results: 46,XX

Cell Line Sex: Female
Reason for Testing: LOT_RELEASE
Investigator: WiCell Stem Cell Bank, WiCell



Cell: 5
Slide: G01
Slide Type: Karyotype

Total Counted: 20
Total Analyzed: 8
Total Karyogrammed: 4
Band Resolution: 400 - 500

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".

Short Tandem Repeat

Requestor: WiCell Stem Cell Bank, WiCell
Sample Receipt Date: 28May24
STR Amplification Date: 03Jun24

Sample Name	WA09-WB68405 p28	WA09-WB68404 p28
WiCell CTR No.[1]	102295	102296
FGA	[redacted]	26, 28
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	24	24
Matches[2]	See Results Comment	See Results Comment
Comments		

Identifying information has been redacted to protect donor confidentiality. If more information is required, please contact info@wicell.org

[1] CTR No.: Characterization Test Request Number; also known as a laboratory accessioning number.
[2] The STR profile of the sample(s) listed are a 100% match for the given sample unless otherwise specified.

Short Tandem Repeat

Requestor: WiCell Stem Cell Bank, WiCell
Sample Receipt Date: 28May24
STR Amplification Date: 03Jun24

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

Results: The genotypic profiles comprise a range of 24 allelic polymorphisms across the 15 STR loci analyzed. 102296 and 102295 are 100% matches to 102279, 102278, 100682, 100681, 99356, 99312, 97827, 97437, 97371, 96184 and additional profiles. Additional matches can be provided upon request.

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 suggest 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%.

6/7/2024	6/7/2024	6/7/2024
X Michael Mussar	X Amber Kuhn	X Ryen Smith
Tech #1 Characterization Signed by: Mussar, Michael	Tech #2 Characterization Signed by: Kuhn, Amber	QA Review Quality Assurance Signed by: Smith, Ryen

Mycoplasma Assay Report

PCR-based assay performed by WiCell
WiCell Stem Cell Bank, WiCell
10Jun24

Sample Name	Result	Interpretation
WA09-WB68404 p28 (102296)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
WA09-WB68405 p28 (102295)	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).

6/10/2024 X Amber Kuhn Tech #1 Characterization Signed by: Kuhn, Amber	6/10/2024 X Michael Mussar Tech #2 Characterization Signed by: Mussar, Michael	6/10/2024 X Dawn Graham QA Review Quality Assurance Signed by: Graham, Dawn

A gel image is available upon request.

Native Product Sterility Report

STERIS

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

SAMPLE #: 24051195
DATE RECEIVED: 30-May-24
TEST INITIATED: 31-May-24
TEST COMPLETED: 14-Jun-24

SAMPLE NAME / DESCRIPTION:
SCRP1041i-WB68311
WA09-WB68310
WC006i-FX11-9U-WB68322
WC-24-02-DS-O-WB68333
UCSD231i-SAD1-3-WB68350
WC-24-02-DS-M-WB68400
WA09-WB68404
WA09-WB68405
WA09-WB68406
WA09-WB68407
iPS DF19-9-7T-WB68411
WC028i-5807-6-WB68420

UNIQUE IDENTIFIER: N/A

TEST RESULTS:

# Tested	# Positives (Growth)	- Control
12	0	2 Negatives

TEST SUMMARY:

# Samples	Media Type	Volume (mL)	Incubation Temperature (° C)	Incubation Duration (Days)
12	TSB	40	20-25	14
12	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 _____ DATE 17JUN2024

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.