

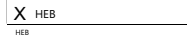


Thaw and Culture Details

Cell Line Name	WA09
WiCell Lot Number	RB66490
Parent Material	WIC-WA09-MB-001
Provider	University of Wisconsin – Dr. James Thomson
Banked By	WiCell
Thaw and Culture Recommendations	WiCell recommends thawing 1 vial into 5 wells of a 6 well plate.
Culture Platform	Feeder Independent
	Medium: mTeSR™1
	Matrix: Matrigel®
Protocol	WiCell Feeder Independent mTeSR™1 Protocol
Passage Number	p30 These cells were cultured for 29 passages prior to freeze. WiCell adds +1 to the passage number to best represent the overall passage number of the cells at thaw.
Date Vialied	01-August-2017
Vial Label	WA09 p30 RB66490
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	Consistent with known profile	Pass
Sterility	Steris	ST/07	Negative	Pass
Mycoplasma	WiCell	SOP-QU-004	Negative	Pass

Approval Date	Quality Assurance Approval
13-December-2017	<div style="text-align: right; font-size: small;">5/28/2020</div>  <div style="font-size: x-small;"> HEB Quality Assurance Signed by Bruner, Holey </div>

Date Reported: Wednesday, August 23, 2017

Cell Line: WA09-RB66490 12726

Passage#: 30

Date of Sample: 8/10/2017

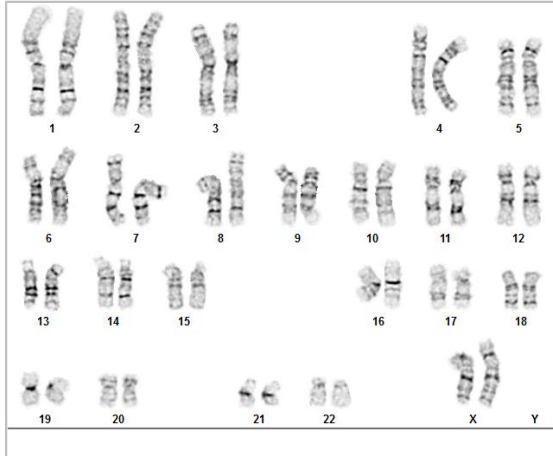
Specimen: Human ESC

Results: 46,XX

Cell Line Gender: Female

Reason for Testing: lot release testing

Investigator: [REDACTED], WiCell CDM



Cell: 41

Slide: G01

Slide Type: Karyotype

Total Counted: 20

Total Analyzed: 8

Total Karyogrammed: 4

Band Resolution: 425 - 525

Interpretation:

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

Completed by: [REDACTED] CG(ASCP)

Reviewed and Interpreted by: [REDACTED], 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:

12726-STR
Sample Name on Tube: 12726-STR
57.4 ng/μL, (A260/280=1.96)
Sample Type: Cells
Cell Count: ~2 million cells

Requestor:

WiCell Research Institute
Quality Department

Sample Date: N/A

Receive Date: 08/14/17
Assay Date: 08/16/17
File Name: STR 170817 wmr
Report Date: 08/21/17

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	26,28
TPOX	6-13	10,11
D8S1179	7-18	8,14
vWA	10-22	17,17
Amelogenin	X,Y	X,X
Penta_D	2.2, 3.2, 5, 7-17	9,13
CSF1PO	6-15	11,11
D16S539	5, 8-15	12,13
D7S820	6-14	9,11
D13S317	7-15	9,9
D5S818	7-16	11,12
Penta_E	5-24	11,14
D18S51	8-10, 10.2, 11-13, 13.2, 14-27	13,13
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	30,30
TH01	4-9,9.3,10-11,13.3	9.3,9.3
D3S1358	12-20	13,16

Results: Based on the 12726-STR cells submitted by WiCell QA dated and received on 08/14/17, this sample (Label on Tube: 12726-STR) exactly matches the STR profile of the human stem cell line WA09 comprising 24allelic polymorphisms across the 15 STR loci analyzed.

Interpretation: No STR polymorphisms other than those corresponding to the human WA09 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 12726-STR sample submitted corresponds to the WA09 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 08/23/17

X_{WMR}

Digitally Signed on 08/23/17

TRIP Laboratory, Molecular

PhD, Director / Co-Director
UWHC Molecular Diagnostics Laboratory / UWSPH TRIP Laboratory

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 30, 2017

FORM SOP-QU-004.01

Version F Edition 02

Reported by: KR

Reviewed by:

BD Monolight 180

#	Sample Name	Reading A			Reading B			Ratio B/A	Result	Comments/Suggestions
		RLU1	RLU2	Ave	RLU1	RLU2	Ave			
1	WA09-RB66490 12806	211	218	214.5	76	75	75.5	0.35	Negative	
2	Positive (+) Control	387	395	391	25241	25413	25327	64.77	Positive	
3	Negative (-) Control	573	581	577	66	63	64.5	0.11	Negative	

