Thaw and Culture Details

Cell Line Name	**WA01**
WiCell Lot Number	**WB34444**
Provider	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.
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, 7 of them in mTeSR™1/ Matrigel®. WiCell adds +1 to the passage number to best represent the overall passage number of the cells at thaw.
Date Vialed	19-May-2016
Vial Label	WA01 p30 WB34444
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
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	Biotest Laboratories	ST/07	Negative	Pass
Mycoplasma	WiCell	SOP-QU-004	Negative	Pass
Karyotype by G-banding	WiCell	SOP-CH-003	Expected karyotype	Pass

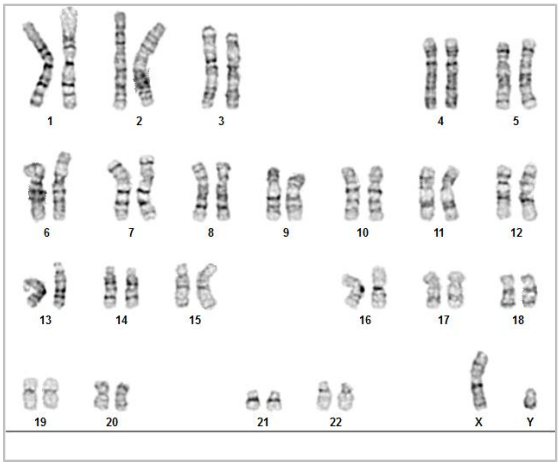
Approval Date	Quality Assurance Approval
16-August-2016	8/16/2016 X JKG JKG Quality Assurance Signed by: Gay, Jenna

Chromosome Analysis Report: 036175

Date Reported: Monday, June 06, 2016
Cell Line: WA01-WB34444 11692
Passage#: 30
Date of Sample: 6/3/2016
Specimen: hESC
Results: 46,XY

Cell Line Gender: Male
Reason for Testing: Lot release testing

Investigator: Steve Schreiber, WiCell CDM



Cell: 51
Slide: 1
Slide Type: Karyotype

Total Counted: 20
Total Analyzed: 8
Total Karyogrammed: 4
Band Resolution: 475 - 550

Interpretation:

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

Completed by: Kim Leonhard, CG(ASCP)
Reviewed and Interpreted by: Julie Leana Cox, 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".

Short Tandem Repeat Analysis

School of Medicine and Public Health
UNIVERSITY OF WISCONSIN-MADISON
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:
11692-STR
Sample Name on Tube: 11692-STR
96.2 ng/µL, (A260/280=1.94)
Sample Type: Cells
Cell Count: ~2 million cells

Requestor:
WiCell Research Institute
Quality Department

Sample Date: N/A
Receive Date: 06/13/16
Assay Date: 06/15/16
File Name: STR 160617 wmr
Report Date: 06/20/16

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	20,24
TPOX	6-13	8,11
D8S1179	7-18	12,13
vWA	10-22	15,17
Amelogenin	X,Y	X,Y
Penta_D	2.2, 3.2, 5, 7-17	10,13
CSF1PO	6-15	12,13
D16S539	5, 8-15	9,13
D7S820	6-14	8,12
D13S317	7-15	8,11
D5S818	7-16	9,11
Penta_E	5-24	10,12
D18S51	8-10, 10.2, 11-13, 13.2, 14-27	17,18
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	28,32.2
TH01	4-9,9.3,10-11,13.3	9.3,9.3
D3S1358	12-20	15,15

<u>Results:</u> Based on the 11692-STR cells submitted by WiCell QA dated and received on 06/13/16, this sample (Label on Tube: 11692-STR) exactly matches the STR profile of the human stem cell line WA01 comprising 28 allelic polymorphisms across the 15 STR loci analyzed.

<u>Interpretation:</u> No STR polymorphisms other than those corresponding to the human WA01 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 11692-STR sample submitted corresponds to the WA01 stem cell line and was not contaminated with any other human stem cells or a significant amount of mouse feeder layer cells.

<u>Sensitivity:</u> 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 06/20/16**

Rebecca M. Baus
TRIP Laboratory, Molecular

X *WMR* **Digitally Signed on 06/20/16**

William M. Rehrauer, PhD, Director / Co-Director
UWHC Molecular Diagnostics Laboratory / UWSMPH TRIP Laboratory

Sterility Report

Biotest Laboratories, Inc.
Making life-saving products possible

WiCell Research Institute, Inc.
WiCell Quality Assurance
504 South Rosa Road, Room 101
Madison, WI 53719

BIOTEST SAMPLE # 16070342

VALIDATION # NG

TEST PURPOSE NG

PRODUCT: RUES2-WB33580 11727, LT1e-OLIG2GFP-WB37417 11744, WA07-WB35901 11743, MIN19i-33811.D-WB33919 11739, MIN10i-33360.A-WB33910 11731, MIN11i-33360.B-WB33880 11738, MIN05i-33110.2F-WB34134 11732, IISH6i-CML17-WB34443 11730, MIN06i-33110.2H-WB34135 11733, MIN18i-33811.A-WB34313 11734, WA07-WB34437 11735, H9 hNanog-pGZ-WB37309 11741, H1 Oct4-EGFP-WB36220 11742, IISH3i-CB6-WB36684 11740, WA01-WB34444 11736, WA01-WB34445 11737, WA01-WB35185 11728, WA01-WB35186 11729, UCSD067i-19-1-DB25375 11746, UCSD068i-19-2-DB25895 11745

PRODUCT LOT	NA		
STERILE LOT	NA	BI LOT	NA
STERILIZATION LOT	NA	BI EXPIRATION DATE	NA
STERILIZATION DATE	NA	DATE RECEIVED	2016-07-07
STERILIZATION METHOD	NA	TEST INITIATED	2016-07-08
SAMPLING BLDG / ROOM	NA	TEST COMPLETED	2016-07-22

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

Twenty (20) products were divided between 40 mL TSB and 40 mL FTG. The sample was then cultured at 20-25 C and 30-35 C respectively and was monitored for a minimum of 14 days.

- ☒ USP
- ☐ BI Manufacturers Specifications
- ☐ Other

RESULTS	# POSITIVES	# TESTED	POSITIVE CONTROL	NEGATIVE CONTROL
No Growth	0	20	NA	2 Negatives

COMMENTS NA

REVIEWED BY Hansond DATE 26JUL16

Mycoplasma Detection Assay Report

Testing Performed by WiCell

Lot Release Test

June 2nd, 2016

FORM SOP-QU-004.01
Version F Edition 01
Reported by: SM
Reviewed by: JB
Berthold Flash n' Glo 180

#	Sample Name	Reading A		A Ave	Reading B		B Ave	Ratio B/A	Result	Comments/Suggestions
		RLU1	RLU2		RLU1	RLU2				
1	WA01-WB34444 11692	175	175	175	104	115	109.5	0.63	Negative	
2	Positive (+) Control	231	239	235	16358	16436	16397	69.77	Positive	
3	Negative (-) Control	397	400	398.5	45	45	45	0.11	Negative