



Thaw and Culture Details

Cell Line Name	MIN02i-32517.B
WiCell Lot Number	WB20619
Provider	Massachusetts General Hospital
Banked By	WiCell
Thaw and Culture Recommendations	WiCell recommends thawing 1 vial into 4 wells of a 6 well plate.
Culture Platform	Feeder Independent
	Medium: mTeSR™1
	Matrix: Matrigel®
Protocol	WiCell Feeder Independent mTeSR™1 Protocol
Passage Number	p14 These cells were cultured for 13 passages prior to freeze. WiCell adds +1 to the passage number at freeze to best represent what the overall passage number of the cells at thaw. Plated cells at thaw should be labeled passage 14.
Date Vialied	26-June-2015
Vial Label	MIN02i-32517.B p14 WB20619
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	See Report
	Results: 46,XY Nonclonal findings: 47,XY,+9 Interpretation: This is a normal karyotype; no clonal abnormalities were detected at the stated band level of resolution. There is a nonclonal finding, listed above. Nonclonal findings may result from technical artifact, but may be due to a developing clonal abnormality or to low-level mosaicism.			
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	Defines profile	Pass
Sterility	Steris	ST/07	Negative	Pass
Mycoplasma	WiCell	SOP-CH-044	Negative	Pass



Testing Reported by Provider

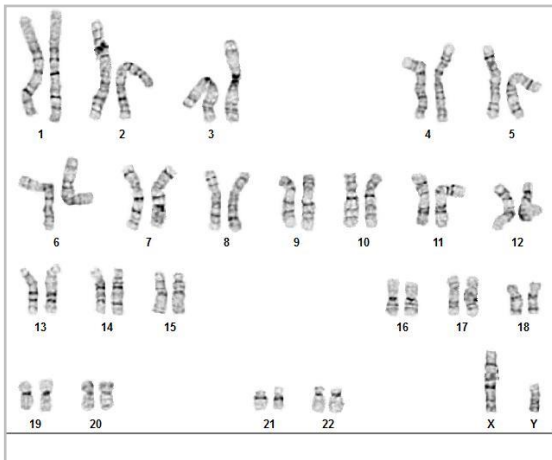
Test Description & Method	Result
Genetic Analysis by Karyotype	Normal
Embryoid Body Formation	RT-PCR (Flk, GATA2 - Meso; AFP, GATA4 - Endo; Pax6, N-CAM – Ectoderm)
Teratoma	Teratoma Formed
Pluripotency Markers; AP, Oct4, Nanog, SSEA-3, SSEA-4, TRA1-60	All Markers Expressed

Date Available	Quality Assurance Approval
09-October-2015	<div style="text-align: right; font-size: small;">3/14/2019</div> <div style="text-align: center;">X JKG</div> <hr/> <div style="font-size: x-small;">JKG Quality Assurance Signed by: Gay, Jenna</div>

Date Reported: Tuesday, February 19, 2019
Cell Line: MIN02i-32517.B-WB20619 14263
Passage#: 14
Date of Sample: 2/11/2019
Specimen: Human IPS
Results: 46,XY

Cell Line Sex: Male
Reason for Testing: lot release testing
Investigator: [REDACTED], WiCell

Nonclonal findings: 47,XY,+9



Cell: 4
Slide: G01
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.

There is a nonclonal finding, listed above. Nonclonal findings may result from technical artifact, but may be due to a developing clonal abnormality or to low-level mosaicism.

Completed by: [REDACTED], CG(ASCP)
Reviewed and Interpreted by: [REDACTED], PhD, FACMG

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.

Department of Pathology and Laboratory Medicine
 TRIP Laboratory (Molecular)
<https://research.pathology.wisc.edu/trip/>
 (608) 265-9168

characterization@wicell.org
 (608) 316-4145

Sample Report:
 14263-STR
Sample Name on Tube: 14263-STR
 84.4 ng/ μ L, (A260/280=2.05)
Sample Type: Cells
Cell Count: ~2 million cells

Requestor:
 WiCell Research Institute
 Quality Assurance Department

Receive Date: 02/18/19
Report Sent: 02/25/19
Assay Date: 02/19/19
File Name: STR 190220 wmr
Report Date: 02/25/19

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	Identifying information has been redacted to protect donor confidentiality. If more information is required, please, contact WiCell's Technical Support .
TPOX	6-13	
D8S1179	7-18	
vWA	10-22	
Amelogenin	X,Y	
Penta_D	2.2, 3.2, 5, 7-17	
CSF1PO	6-15	
D16S539	5, 8-15	
D7S820	6-14	
D13S317	7-15	
D5S818	7-16	
Penta_E	5-24	
D18S51	8-10, 10.2, 11-13, 13.2, 14-27	
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	
TH01	4-9,9.3,10-11,13.3	
D3S1358	12-20	

Results: Based on the 14263-STR cells submitted by WiCell QA dated and received on 02/18/19, this sample (Label on Tube: 14263-STR) defines the STR profile of the human stem cell line MIN02i-32517.B comprising 28 allelic polymorphisms across the 15 STR loci analyzed.

Interpretation: No STR polymorphisms other than those corresponding to the human MIN02i-32517.B 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 14263-STR sample submitted corresponds to the MIN02i-32517.B 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%.

¹For this sample a microvariant exists at the D7S820 loci with a size between 10 and 11.

X *RMB*

Digitally Signed on 02/25/19

██████████, BA
 TRIP Laboratory, Molecular

X *WMR*

Digitally Signed on 02/25/19

██████████, PhD, Director / Co-Director
 UWHC Molecular Diagnostics Laboratory / UWSMPH TRIP Laboratory

Testing was accomplished by analysis of human genetic polymorphisms at STR loci. This methodology has not yet been approved by the FDA and is for investigational use only.

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Native Product Sterility Report



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

SAMPLE #: 19020546
DATE RECEIVED: 07-Feb-19
TEST INITIATED: 12-Feb-19
TEST COMPLETED: 26-Feb-19

SAMPLE NAME / DESCRIPTION: JHU142i DB41344 14264
LUEL8357i-3 WB66993 14265
LUEL8361i-2 WB66989 14266
LUEL7991i-4 WB66994 14267
WC039i-17097-01-22 WB67004 14268
WC040i-17097-01-26 WB67005 14269
WC041i-17097-01-34 WB67002 14270
LUEL7159i-7 WB67001 14271
JHU106i WB67003 14272
LUEL8312i-4 WB67006 14273
WA09 WB66998 14306
WA09 WB66999 14307
WA09 WB67000 14308
STAN269i-720C2 DB44430 14309
STAN371i-868C5 DB44638 14310
WC038i-38-01 WB67007 14311
MIN02i-32517.B WB20619 14312
JHU162i DB36362 14313
STAN175i-373C4 DB44553 14322
STAN176i-373C6 DB44556 14323

UNIQUE IDENTIFIER: NA

TEST RESULTS:

# Tested	# Positives (Growth)	- Control
20	1	2 Negatives

TEST SUMMARY:

# Samples	Media Type	Volume (mL)	Incubation Temperature (° C)	Incubation Duration (Days)
20	TSB	40	20-25	14
20	FTG	40	30-35	14

REFERENCE:

Processed according to LAB-003: Sterility Test Procedure

PD #: 000053

Native Product Sterility Report



COMMENTS: Sample labeled as "JHU142i DB41344 14264" was positive in both TSB and FTG.

REVIEWED BY

A handwritten signature in blue ink, appearing to read "G. M. [unclear]", written over a horizontal line.

DATE

28 FEB 19

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.



Mycoplasma Assay Report

PCR-based assay performed by WiCell

Lot Release Testing

13Feb19

FORM SOP-CH-044.03

Version B Edition 01

#	Sample Name	Result	Comments/Suggestions
1	MIN02i-32517.B-WB20619 14263	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
6	Positive (+) Control	Positive	
7	Negative (-) Control	Negative	

Reported by: Sondra Minter, Cell Culture Specialist

Reviewed by: Brenna Anderson, Research Specialist-Cytogenetics

Date: _____ **Sent By:** _____ **Sent To:** _____

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A gel image is available upon request.