

### **Thaw and Culture Details**

Cell Line Name	MIN18i-33811.A
WiCell Lot Number	WB20022
Provider	Massachusetts General Hospital
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 <sup>™</sup> 1 Protocol
Passage Number	p9 These cells were cultured for 8 passages prior to freeze. WiCell adds +1 to the passage number at freeze so that the number on the vial best represents the overall passage number of the cells at thaw
Date Vialed	02-June-2015
Vial Label	MIN18i-33811.A p9 WB20022
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	Defines 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 <sup>1</sup>	Pass

<sup>1</sup>This is the first karyotype of this cell line.

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The material provided under this certificate has been subjected to the tests specified and the results and data described herein are accurate based on WiCell's reasonable knowledge and belief. Appropriate Biosafety Level practices and universal precautions should always be used with this material. For clarity, the foregoing is governed solely by WiCell's Terms and Conditions of Service, which can be found at http://www.wicell.org/privacyandterms.



# **Testing Reported by Provider**

Test Description & Method	Result
Embryoid Body Formation	RT(q)PCR (Brachyury, GATA2 - Meso; AFP, Sox17 - Endo; Pax6, MAP2 - Ectoderm)
Pluripotency Markers; AP, Oct4, Nanog, SSEA-3, SSEA-4, TRA1-60	All Markers Expressed

Approval Date	Quality Assurance Approval		
00 0-4-6 0015	6/24/2016		
09-October-2015	AMK Quality Assurance Signed by: Klade, Anjelica		

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Short Tandem Repeat Analysis

Department of Pathology and Laboratory Medicine TRIP Laboratory (Molecular) http://www.pathology.wisc.edu/research/trip

Sample Report: 11650-STR Sample Name on Tube: 11650-STR 59.8 ng/μL, (A260/280=1.88) Sample Type: Cells Cell Count: ~2 million cells **Requestor:** WiCell Research Institute Quality Department WiCell<sup>®</sup> info@wicell.org (888) 204-1782

Sample Date: N/A Receive Date: 06/01/16 Assay Date: 06/07/16 File Name: STR 160609 wmr Report Date: 06/14/16

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	Identifying information has
ТРОХ	6-13	been redacted to
D8S1179	7-18	protect donor
vWA	10-22	confidentiality. If
Amelogenin	X,Y	more information
Penta_D	2.2, 3.2, 5, 7-17	is required, please, contact
CSF1PO	6-15	WiCell's Technical
D16S539	5, 8-15	Support.
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	

<u>Results:</u> Based on the 11650-STR cells submitted by WiCell QA dated and received on 06/01/16, this sample (Label on Tube: 11650-STR) defines the STR profile of the human stem cell line MIN18i-33811.A comprising 27 allelic polymorphisms across the 15 STR loci analyzed.

<u>Interpretation:</u> No STR polymorphisms other than those corresponding to the human MIN18i-33811.A 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 11650-STR sample submitted corresponds to the MIN18i-33811.A 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 06/16/16	X WMR	Digitally Signed on	06/16/16
TRIP Laboratory, Molecular	UWHC Molec	, PhD, Director / Co-Direct ular Diagnostics Laboratory / UW	

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. Acknowledge TRIP in your publications, posters & presentations. For details, see: http://www.pathology.wisc.edu/research/trip/acknowledging TRIP agrees to maintain the confidentiality of any information provided to it in connection with its performance of this STR analysis on the same conditions as set forth in paragraph 2 of WiCell's Terms and Conditions of Service (http://www.wicell.org/media.acux/1a429b84-2b54-44a4-8ad8-5c05db93dd8a).

WiCell Research Institute,	Inc.		BIOTEST SAMPLE #	15111558
WiCell Quality Assurance			VALIDATION #	NG
			TEST PURPOSE	NG
PRODUCT PRODUCT LOT	WA28-WB25835 11480, WA39-WB26020 11483, MIN10i-33360.A-WB2001 MIN13i-33362.D-WB1956 NA	WA42-WB25 4 11486, MI	838 11484, WA45-WB2 N11i-33360.B-WB20012	5712 11485 11487
STERILE LOT	NA		BILOT	NA
STERILIZATION LOT	NA		BI EXPIRATION DATE	NA
STERILIZATION DATE	NA		DATE RECEIVED	2015-11-18
STERILIZATION METHOD	NA		TEST INITIATED	2015-11-25
SAMPLING BLDG / ROOM	NA		TEST COMPLETED	2015-12-09
REFERENCE	Processed according to	o LAB-003: S	terility Test Procedure	
	Ten (10) products were each cultured in 40 mL			5 C and 10 products were a minimum of 14 days.
	USP BI Manufacturers Spe Other	cifications		
RESULTS Sterile	# POSITIVES # 0	# TESTED 10	POSITIVE CONTR NA	OL NEGATIVE CONTROL 2 Negatives
COMMENTS NA				
			DATE	09 DEC15

Specific test results may not be indicative of the characteristics of any other samples from the same lot or similar lots. Liability is limited to the costs of the tests.

Biotest Laboratories = 9303 West Broadway Ave. = Brooklyn Park, MN 55445 = USA = (763) 315-1200 A subsidiary of STERIS Corporation

Form: M-002 rev. 11 Effective: 13JUN13

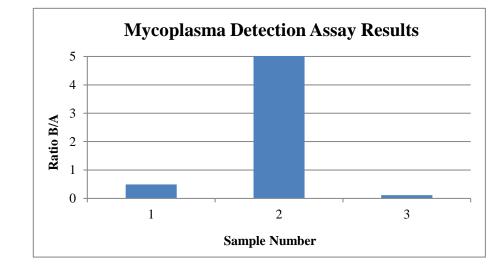




#### Mycoplasma Detection Assay Report Testing Performed by WiCell

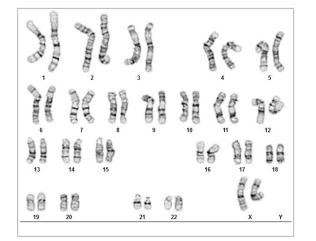
Testing Performed by WiCell Lot Release Testing May 6th, 2016 FORM SOP-QU-004.01 Version E Edition 01 Reported by: SS Reviewed by: JB Berthold Flash n' Glo 539

		Read	ing A	Α	Read	ing B	В	Ratio		
#	Sample Name	RLU1	RLU2	Ave	RLU1	RLU2	Ave	B/A	Result	<b>Comments/Suggestions</b>
1	MIN18i-33811.A-WB20022 11650	116	116	116	56	58	57	0.49	Negative	
2	Positive (+) Control	225	238	231.5	19246	19260	19253	83.17	Positive	
3	Negative (-) Control	342	336	339	40	37	38.5	0.11	Negative	





Date Reported: Wednesday, May 11, 2016 Cell Line: MIN18i-33811.A-WB20022 11650 Passage#: 9 Date of Sample: 5/6/2016 Specimen: iPSC Results: 46,XX



Cell Line Gender: Reason for Testir	Female ng: Lot release testing
Investigator:	, WiCell CDM
Cell: 5	
Slide: 1	
Slide Type:	Karyotype
Total Count	ted: 20
Total Analy	zed: 8
Total Karyo	grammed: 4

Band Resolution: 450 - 550

#### Interpretation:

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

Completed by: Reviewed and Interpreted by: A signed copy of this report is ava	,	(ASCP) PhD, FACMG uest.	
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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