




Certificate of Analysis

Thaw and Culture Details

Cell Line Name	CVCL_C7VF	
WiCell Lot Number	WB69111	
Provider/Client	University of California - Berkeley – Dr. Dirk Hockemeyer	
Banked By	WiCell	
Thaw and Culture Recommendations	WiCell recommends thawing 1 vial into 1 well of a 6 well plate using iSCORE 01 medium and MEF. WiCell recommends thawing using ROCK Inhibitor for best results.	
Protocol	WiCell Feeder Based (MEF) Protocol 01 for Culture of MJFF iSCORE Lines	
Culture Platform Prior to Freeze	Medium: iSCORE 01 medium	Matrix: MEF
Passage Number	p42 Colony selection occurred at passage 23. Cells were cultured for 18 passages prior to freeze and post colony selection. Plated cells at thaw should be labeled passage 42.	
Date Viald	24-September-2025	
Vial Label	CVCL_C7VF p42 WB69111 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
	<p>Results: 46,XX Interpretation: This is a normal karyotype; no clonal abnormalities were detected at the stated band level of resolution.</p>			
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™	Defines 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

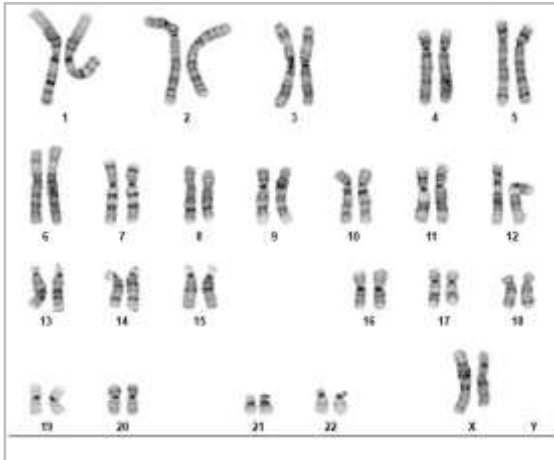
Approval Date	WiCell Quality Assurance Approval
03-April-2026	<div style="text-align: right; font-size: small;">4/3/2026</div> <div style="border: 1px solid black; padding: 2px; font-size: x-small;"> X HEB HEB WiCell Quality Assurance Signed by: Bruner, Haley </div>

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>.

Date Reported: October 23, 2025
Cell Line: CVCL_C7VF-WB69111
Submitted Passage #: 45
Date of Sample: 10/17/2025
Specimen: Human Modified ESC
Results: 46,XX

Cell Line Sex: Female
Reason for Testing: LOT_RELEASE

Investigator: WiCell Stem Cell Bank, WiCell



Cell: 30
Slide: G03
Slide Type: Karyotype

Total Counted: 20
Total Analyzed: 8
Total Karyogrammed: 4
Band Resolution: 425 - 475

Interpretation:

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

Completed by: Davena Lira, CG(ASCP)
Reviewed and Interpreted by: Justin Schleede, 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".

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.



Short Tandem Repeat

Form SOP-89.01
Version 15.0

Requestor: WiCell Stem Cell Bank, WiCell

Sample Receipt Date: 17Oct25, 20Oct25, 21Oct25, 23Oct25, 24Oct25

STR Amplification Date: 28Oct25

Sample Name	JHU139i-DB36275 p7	CVCL_C7VF-WB69111 p45	PENN172i-M15-10-DB36105 p19	SUSL-025_C6-WB69138 p21	SUSL-046_C9-WB69134 p13	iPSC 61 MC-EC69102 p10
WiCell CTR No. ¹	109576	109577	109578	109579	109580	109582
FGA	Identifying information has been redacted to protect donor confidentiality. If more information is required, please contact info@wicell.org	22, 23	Identifying information has been redacted to protect donor confidentiality. If more information is required, please contact info@wicell.org			
TPOX		8, 9				
D8S1179		11, 13				
vWA		14, 20				
Amelogenin		X, X				
Penta_D		9, 13				
CSF1PO		10, 12				
D16S539		11, 13				
D7S820		10, 11				
D13S317		11, 14				
D5S818		11, 12				
Penta_E		7, 18				
D18S51		16, 16				
D21S11		30, 32.2				
TH01	9.3, 9.3					
D3S1358	14, 17					
Allelic Polymorphisms	26	28	25	26	27	28
Matches ²		See Results	109234	109488, 109446	109464, 109397, 109398	105952, 109530, 106195
Comments	Tri-allelic Pattern					

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

Form SOP-89.01

Version 15.0

Requestor: WiCell Stem Cell Bank, WiCell

Sample Receipt Date: 17Oct25, 20Oct25, 21Oct25, 23Oct25, 24Oct25

STR Amplification Date: 28Oct25

Sample Name	JHU255i-DB37129 p7	JHU256i-DB37132 p11	ZFN 3.1-DB68958 p79	ZFN 1.7-DB68957 p77	ZFN 1.13-DB68959 p79	SUSL-066_C2-DB68952 p8
WiCell CTR No. ¹	109583	109584	109585	109596	109597	109653
FGA	Identifying information has been redacted to protect donor confidentiality. If more information is required, please contact info@wicell.org					
TPOX						
D8S1179						
vWA						
Amelogenin						
Penta_D						
CSF1PO						
D16S539						
D7S820						
D13S317						
D5S818						
Penta_E						
D18S51						
D21S11						
TH01						
D3S1358						
Allelic Polymorphisms	24	27	28	28	28	28
Matches ²			109596, 109597	109585, 109597	109585, 109596	
Comments						

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

Form SOP-89.01
Version 15.0

Requestor: WiCell Stem Cell Bank, WiCell

Sample Receipt Date: 17Oct25, 20Oct25, 21Oct25, 23Oct25, 24Oct25

STR Amplification Date: 28Oct25

Sample Name	SUSL-073_C8-DB68961 p5	SUSL-073_C3-DB68960 p5
WiCell CTR No. ¹	109660	109661
FGA	Identifying information has been redacted to protect donor confidentiality. If more information is required, please contact info@wicell.org	
TPOX		
D8S1179		
vWA		
Amelogenin		
Penta_D		
CSF1PO		
D16S539		
D7S820		
D13S317		
D5S818		
Penta_E		
D18S51		
D21S11		
TH01		
D3S1358		
Allelic Polymorphisms	24	24
Matches ²	109661	109660
Comments		

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: 17Oct25, 20Oct25, 21Oct25, 23Oct25, 24Oct25

STR Amplification Date: 28Oct25

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 24-28 allelic polymorphisms across the 15 STR loci analyzed. Samples 109577 is 100% to 109490, 109407, 109139, 109380, 109332, 109197, 109232, 109158, 108776, 108996, 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. A tri-allelic pattern was detected at the D18S51 loci of sample 109576. This observation could be the result of chromosomal gains and/or amplifications in this cell line.

Sensitivity: Sensitivity limits for detection of STR polymorphisms unique to either this or other human cell lines is ~2-4%.

10/31/2025	10/31/2025	10/31/2025
X Steph Dos Santos	X Michael Mussar	X Brad Harmening
Tech #1 Characterization Signed by: Dos Santos, Stephany	Tech #2 Characterization Signed by: Mussar, Michael	QA Review Quality Assurance Signed by: Harmening, Brad

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Mycoplasma Assay Report

PCR-based assay performed by WiCell
WiCell Stem Cell Bank, WiCell
21Oct25

Form SOP-83.01
Version 7.0

Sample Name	Result	Interpretation
SUSL-046_C9-WB69134 p13 (109580)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
SUSL-025_C6-WB69138 p21 (109579)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
PENN172i-M15-10-DB36105 p19 (109578)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
CVCL_C7VF-WB69111 p45 (109577)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
JHU139i-DB36275 p7 (109576)	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).

10/21/2025	10/21/2025	10/21/2025
X Steph Dos Santos	X Amber Kuhn	X Manda Weber
Tech #1 Characterization Signed by: Dos Santos, Stephany	Tech #2 Characterization Signed by: Kuhn, Amber	QA Review Quality Assurance Signed by: Weber, Manda

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A gel image is available upon request.

Native Product Sterility Report



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

SAMPLE #: 25100984
DATE RECEIVED: 30-Oct-25
TEST INITIATED: 31-Oct-25
TEST COMPLETED: 14-Nov-25

SAMPLE NAME / DESCRIPTION: CVCL_C7UZ-WB69110
CVCL_C7VF-WB69111
CVCL_C7VT-WB69109
CVCL_C7VT-WB69112
hIPSC-Di21-c2-4-3-WB69135
hIPSC-Di21-c2-4-3-WB69136
JHU255i-WB69879
STAN151i-303C3-WB69141
STAN359i-442C11-WB69310
SUSL-025_C2-WB69132
SUSL-025_C6-WB69138
SUSL-046_C1-WB69114
SUSL-046_C2-WB69115
SUSL-046_C9-WB69134
SUSL-047_C2-WB69139
SUSL-047_C5-WB69133
SUSL-047_C8-WB69889
WC-24-02-DS-B-WB69140
WC-24-02-DS-B-WB69596
ZFN 3.1-WB69971

UNIQUE IDENTIFIER: N/A

TEST RESULTS:

# Tested	# Positives (Growth)	- Control
20	0	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

TEST METHODOLOGY: USP - Direct Transfer

Native Product Sterility Report



COMMENTS: Sample #25100984

AUTHORIZED BY _____

A handwritten signature in blue ink, consisting of several overlapping loops and strokes, positioned over the signature line.

DATE 18 Nov 2023

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.