



Certificate of Analysis

Thaw and Culture Details

Cell Line Name	WIBR3-S3	
WiCell Lot Number	WB68940	
Provider/Client	Whitehead Institute	
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	p31 Cells were cultured for 30 passages prior to freeze post colony selection. Plated cells at thaw should be labeled passage 31.	
Date Viald	06-June-2025	
Vial Label	WIBR3-S3 p31 WB68940 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
29-January-2026	<p style="text-align: right;">1/29/2026</p> <p>X HEB _____ <small>HEB WiCell Quality Assurance Signed by: Bruner, Haley</small></p>

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: August 06, 2025

Cell Line: WIBR3-S3-WB68940

Submitted Passage #: 33

Date of Sample: 7/31/2025

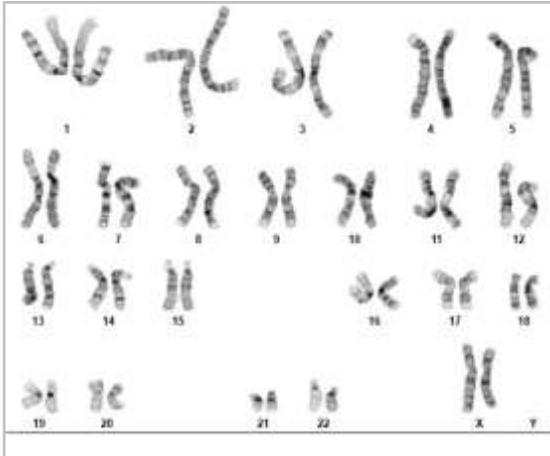
Specimen: Human ESC

Results: 46,XX

Cell Line Sex: Female

Reason for Testing: LOT_RELEASE

Investigator: WiCell Stem Cell Bank, WiCell



Cell: 31

Slide: G03

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.

Completed by: Dawn Davis, 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: 27Jul25, 29Jul25, 31Jul25, 04Aug25
STR Amplification Date: 06Aug25

Sample Name	WIBR3-S3- WB68940 p33	WIBR3-S1- WB68893 p30	CVCL_C7V3- WB68899 p46	CVCL_C7V2- WB68887 p43	CVCL_C7VG- WB68944 p41	BCHi015-A-2- DB68704 p19
WiCell CTR No. ¹	108572	108571	108532	108531	108613	108617
FGA	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	28	28	28	28	28	29
Matches ²	See Results	See Results	See Results	See Results	See Results	
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: 27Jul25, 29Jul25, 31Jul25, 04Aug25

STR Amplification Date: 06Aug25

Sample Name	STAN224i-514C3-DB44527 p14
WiCell CTR No.¹	108525
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	28
Matches²	108516
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: 27Jul25, 29Jul25, 31Jul25, 04Aug25
STR Amplification Date: 06Aug25

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 28-29 allelic polymorphisms across the 15 STR loci analyzed. Samples 108613,108572, 108571, 108531 and 108532 are a 100% match to each other and to 108266, 108053, 107971, 107917, 107916, 107882, 107881, 107640, 107471, 107305 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.

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

8/14/2025	8/15/2025	8/18/2025
<p>X Kaylie Haddix</p> <hr/> <p>Tech #1 Characterization Signed by: Haddix, Kaylie</p>	<p>X Steph Dos Santos</p> <hr/> <p>Tech #2 Characterization Signed by: Dos Santos, Stephany</p>	<p>X Andy Arntz</p> <hr/> <p>QA Review Quality Assurance Signed by: Arntz, Andy</p>

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Mycoplasma Assay Report

PCR-based assay performed by WiCell
WiCell Stem Cell Bank, WiCell
01Aug25

Form SOP-83.01
Version 7.0

Sample Name	Result	Interpretation
WIBR3-S3-WB68940 p33 (108572)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
WIBR3-S1-WB68893 p30 (108571)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
CVCL_C7V3-WB68899 p46 (108532)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
CVCL_C7V2-WB68887 p43 (108531)	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).

8/1/2025	8/6/2025	8/7/2025
X John Raff Tech #1 Characterization Signed by: Raff, John	X Jacob Chow Tech #2 Characterization Signed by: Chow, Jacob	X Hunter Hefti QA Review Quality Assurance Signed by: Hefti, Hunter

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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 #: 25070686
DATE RECEIVED: 24-Jul-25
TEST INITIATED: 25-Jul-25
TEST COMPLETED: 08-Aug-25

SAMPLE NAME / DESCRIPTION:

- CVCL_C7VH-WB68975
- CVCL_C7VM-WB68994
- CVCL_C7VN-WB69011
- CVCL_C7VP-WB68993
- CVCL_C7VQ-WB68992
- CVCL_C7VR-WB69005
- CVCL_C7VT-WB68945
- CVCL_C7VW-WB68972
- CVCL_C7VX-WB68985
- CVCL_C7VY-WB68973
- CVCL_D3YC-WB69004
- WIBR3-WB68995
- WIBR3-WB69008
- WIBR3-S1-WB68893
- WIBR3-S2-WB68916
- WIBR3-S3-WB68940
- STAN224i-514C3-DB44527
- STAN225i-514C4-DB44531
- STAN261i-698C5-DB35565
- STAN336i-963C1-DB44503
- STAN337i-963C3-DB44506

UNIQUE IDENTIFIER: NA

TEST RESULTS:

# Tested	# Positives (Growth)	- Control
21	0	2 Negatives

TEST SUMMARY:

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

REFERENCE:

Processed according to LAB-003: Sterility Test Procedure

PD #: 000053

Native Product Sterility Report



TEST METHODOLOGY: USP - Direct Transfer

COMMENTS: Sample #25070686

AUTHORIZED BY Lee Vang

DATE 11 Aug 25

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.