




Certificate of Analysis

Thaw and Culture Details


Cell Line Name	H9-CAG-ChR2-EYFP	
WiCell Lot Number	WB73692	
Parent Material	H9-CAG-ChR2-EYFP- WB67468	
Provider/Client	University of Wisconsin – Dr. Su-Chun Zhang	
Banked By	WiCell	
Thaw and Culture Recommendations	WiCell recommends thawing 1 vial into 3 wells of a 6 well plate using mTeSR™ 1 and Matrigel® .	
Protocol	WiCell Feeder Independent Pluripotent Stem Cell Protocol	
Culture Platform Prior to Freeze	Medium: mTeSR™ 1	Matrix: Matrigel®
Passage Number	p32 These cells were cultured for 31 passages post modification. Overall passage number is unknown. WiCell adds +1 to the passage number at freeze to best represent the overall passage number of the cells at thaw. Plated cells at thaw should be labeled passage 32.	
Date Vial	13-January-2026	
Vial Label	H9-CAG-ChR2-EYFP p32 WB73692 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
	Results: 46,XX Interpretation: This is a normal karyotype; no clonal abnormalities were detected at the stated band level of resolution.			
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 Recoverable attachment after passage	Pass
Identity by STR	WiCell	PowerPlex 16 HS System by Promega™	Consistent with 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>  X HEB HEB WiCell Quality Assurance Signed by: Bruner, Haley

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: February 1, 2026

Cell Line Sex: Female

Cell Line: H9-CAG-ChR2-EYFP-WB73692

Reason for Testing: LOT_RELEASE

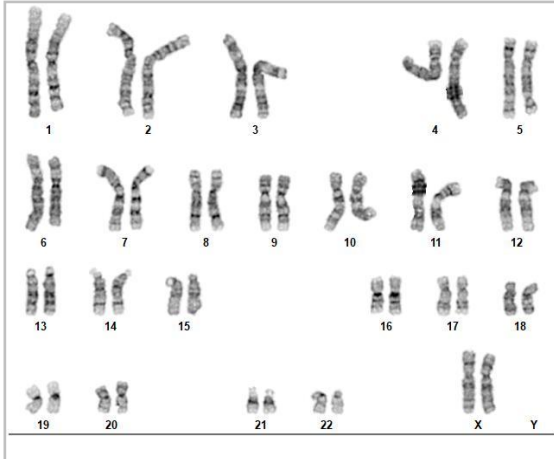
Submitted Passage #: 32

Date of Sample: 1/27/2026

Investigator: WiCell Stem Cell Bank, WiCell

Specimen: Human Modified ESC

Results: 46,XX



Cell: 65

Slide: G02

Slide Type: Karyotype

Total Counted: 20

Total Analyzed: 8

Total Karyogrammed: 4

Band Resolution: 400 - 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

Requestor: WiCell Stem Cell Bank, WiCell
 Sample Receipt Date: 28Jan26, 27Jan26, 23Jan26
 STR Amplification Date: 02Feb26

Form SOP-89.01
 Version 15.0

Sample Name	H9-CAG-ChR2- EYFP-WB73695 p33	CVCL_C7UX- WB73545 p50	H9-CAG-ChR2- EYFP-WB73692 p32	CVCL_C7VH- WB73566 p42	
WiCell CTR No. ¹	110457	110456	110438	110410	
FGA	Identifying information has been redacted to protect donor confidentiality. If more information is required, please contact info@wicell.org		26, 28	Identifying information has been redacted to protect donor confidentiality. If more information is required, please contact info@wicell.org	
TPOX			10, 11		
D8S1179			8, 14		
vWA			17, 17		
Amelogenin			X, X		
Penta_D			9, 13		
CSF1PO			11, 11		
D16S539			12, 13		
D7S820			9, 11		
D13S317			9, 9		
D5S818			11, 12		
Penta_E			11, 14		
D18S51			13, 13		
D21S11			30, 30		
TH01			9.3, 9.3		
D3S1358	13, 16				
Allelic Polymorphisms	24	28	24	28	
Matches ²	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

Requestor: WiCell Stem Cell Bank, WiCell
Sample Receipt Date: 28Jan26, 27Jan26, 23Jan26
STR Amplification Date: 02Feb26

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 110457 and 110438 are a 100% match to each other and to 102296, 102295, 102279, 102278, 101949, 100682, 100681, 99356, 99312, 97827, and additional profiles. Samples 110456 and 110410 are a 100% match to each other and to 109577, 109682, 109744, 109490, 109407, 109139, 109380, 109332, 109197, 109232 and additional profiles. Additional matches for 110457, 110438, 110456, and 110410 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%.

2/6/2026	2/6/2026	2/6/2026
X Steph Dos Santos	X Michael Mussar	X Manda Weber
Tech #1 Characterization Signed by: Dos Santos, Stephany	Tech #2 Characterization Signed by: Mussar, Michael	QA Review Quality Assurance Signed by: Weber, Manda

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Mycoplasma Assay Report

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

30Jan26

Form SOP-83.01

Version 7.0

Sample Name	Result	Interpretation
H9-CAG-ChR2-EYFP-WB73695 p33 (110457)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
CVCL_C7UX-WB73545 p50 (110456)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
H9-CAG-ChR2-EYFP-WB73692 p32 (110438)	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).

1/30/2026	2/2/2026	2/2/2026
X Kaylie Haddix	X Steph Dos Santos	X Manda Weber
Tech #1 Characterization Signed by: Haddix, Kaylie	Tech #2 Characterization Signed by: Dos Santos, Stephany	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 #: 26010721
DATE RECEIVED: 29-Jan-26
TEST INITIATED: 30-Jan-26
TEST COMPLETED: 13-Feb-26

SAMPLE NAME / DESCRIPTION: ZFN 1.13-WB69974
SUSL-073_C3-WB69976
SUSL-073_C8-WB69975
SUSL-066_C2-WB69973
SUSL-073_C10-WB70383
ZFN 1.7-WB70384
SUSL-067_C10-WB73567
SUSL-066_C5-WB73568
SUSL-067_C12-WB73573
SUSL-067_C9-WB73565
SUSL-066_C4-WB73572
H9-CAG-ChR2-EYFP-WB73692
H9-CAG-ChR2-EYFP-WB73695
CVCL_C7VX-WB73547
CVCL_C7VJ-WB73546
CVCL_C7UX-WB73545
CVCL_C7VD-WB73537

UNIQUE IDENTIFIER: N/A

TEST RESULTS:

# Tested	# Positives (Growth)	- Control
17	0	2 Negatives

TEST SUMMARY:

# Samples	Media Type	Volume (mL)	Incubation Temperature (° C)	Incubation Duration (Days)
17	TSB	40	20-25	14
17	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 26010721

AUTHORIZED BY Lee Yang

DATE 17 Feb 26

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.