



Certificate of Analysis

Thaw and Culture Details

| | | |
|----------------------------------|--|-------------------|
| Cell Line Name | BCHi013-A-1 | |
| WiCell Lot Number | DB68699 | |
| Provider/Client | Boston Children's Hospital – Dr. Elizabeth Buttermore | |
| Banked By | Boston Children's Hospital – Dr. Elizabeth Buttermore | |
| Thaw and Culture Recommendations | WiCell recommends thawing 1 vial into 4 wells of a 6 well plate using mTeSR™ Plus and Matrigel®. WiCell recommends thawing using ROCK Inhibitor for best results. | |
| Protocol | WiCell Feeder Independent Pluripotent Stem Cell Protocol | |
| Culture Platform Prior to Freeze | Medium: StemFlex™ | Matrix: Matrigel® |
| Passage Number | p19 Cells were cultured for 19 passages prior to freeze and post reprogramming. Plated cells at thaw should be labeled passage 20. | |
| Date Vialled | 24-March-2025 | |
| Vial Label | HNDS0143-01A CNC21 PTEN +/- p19 mTeSR Plus/VTN 1:6 10cm 10%DMSO/90%KO-SR 03-24-25 TJP | |
| 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 | 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 |
|---------------|---|
| 09-April-2026 | <p style="text-align: right;">4/9/2026</p> <p>X HEB HEB WiCell Quality Assurance Signed by: Bruner, Haley</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: June 05, 2025

Cell Line Sex: Female

Cell Line: BCHi013-A-1-DB68699

Reason for Testing: LOT_RELEASE

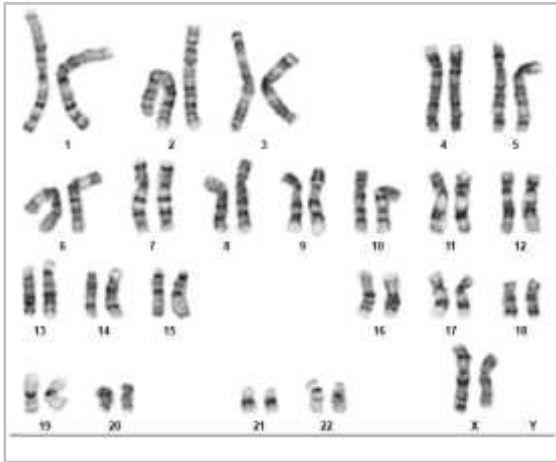
Submitted Passage #: 20

Date of Sample: 6/2/2025

Investigator: WiCell Stem Cell Bank, WiCell

Specimen: Human iPSC

Results: 46,XX



Cell: 12

Slide: G02

Slide Type: Karyotype

Total Counted: 20

Total Analyzed: 8

Total Karyogrammed: 4

Band Resolution: 400 - 450

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: 12Jun25, 10Jun25, 06Jun25, 02Jun25

STR Amplification Date: 12Jun25, 13Jun25

| Sample Name | CVCL_C7V7-WB68815 p40 | PACSHi003-A-DB68806 p9 | CVCL_C7V8-WB68846 p40 | CVCL_C7V5-WB68880 p38 | BCHi013-A-1-DB68699 p20 | CVCL_C7V1-WB68881 p43 |
|-----------------------------|---|------------------------|-----------------------|-----------------------|-------------------------|-----------------------|
| WiCell CTR No. ¹ | 107971 | 107970 | 107917 | 107916 | 107779 | 107881 |
| FGA | <div style="background-color: black; width: 100%; height: 100%; display: flex; align-items: center; justify-content: center;"> <p>Identifying information has been redacted to protect donor confidentiality. If more information is required, please contact info@wicell.org</p> </div> | | | | | |
| TPOX | | | | | | |
| D8S1179 | | | | | | |
| vWA | | | | | | |
| Amelogenin | | | | | | |
| Penta_D | | | | | | |
| CSF1PO | | | | | | |
| D16S539 | | | | | | |
| D7S820 | | | | | | |
| D13S317 | | | | | | |
| D5S818 | | | | | | |
| Penta_E | | | | | | |
| D18S51 | | | | | | |
| D21S11 | | | | | | |
| TH01 | | | | | | |
| D3S1358 | | | | | | |
| Allelic Polymorphisms | 28 | 28 | 28 | 28 | 25 | 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

Form SOP-89.01

Version 15.0

Requestor: WiCell Stem Cell Bank, WiCell
Sample Receipt Date: 12Jun25, 10Jun25, 06Jun25, 02Jun25
STR Amplification Date: 12Jun25, 13Jun25

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 25-28 allelic polymorphisms across the 15 STR loci analyzed. Samples 107971, 107881, 107916 and 107917 are a 100% match to each other and to 105684, 105942, 107124, 107305, 107471, 107640 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%.

| | | |
|---|---|--|
| 6/17/2025 | 6/18/2025 | 6/19/2025 |
| X Amber Kuhn | X Anna Lisa Larson | X Hunter Hefti |
| <hr/> Tech #1 Characterization Signed by: Kuhn, Amber | <hr/> Tech #2 Characterization Signed by: Larson, Anna Lisa | <hr/> QA Review Quality Assurance Signed by: Hefti, Hunter |

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Mycoplasma Assay Report

PCR-based assay performed by WiCell
 WiCell Stem Cell Bank, WiCell
 03Jun25

Form SOP-83.01
 Version 7.0

| Sample Name | Result | Interpretation |
|---|-----------------|--|
| CVCL_C7VH-DB68456 p33 (107782) | Negative | Band was not seen at 270bp, indicating the absence of mycoplasma. |
| CVCL_C7VY-DB68452 p33 (107781) | Negative | Band was not seen at 270bp, indicating the absence of mycoplasma. |
| BCHi013-A-3-DB68700 p20 (107780) | Negative | Band was not seen at 270bp, indicating the absence of mycoplasma. |
| BCHi013-A-1-DB68699 p20 (107779) | Negative | Band was not seen at 270bp, indicating the absence of mycoplasma. |
| Incubator 995 30May25 NM 1/1 (107775) | Negative | Band was not seen at 270bp, indicating the absence of mycoplasma. |
| Incubator 839 30May25 MEFs 1/2 (107774) | Negative | Band was not seen at 270bp, indicating the absence of mycoplasma. |
| Incubator 995 30May25 JG 1/1 (107773) | Negative | Band was not seen at 270bp, indicating the absence of mycoplasma. |
| Incubator 839 30May25 MEFs 2/2 (107772) | Negative | Band was not seen at 270bp, indicating the absence of mycoplasma. |
| Incubator 995 30May25 KC 1/1 (107771) | Negative | Band was not seen at 270bp, indicating the absence of mycoplasma. |
| Incubator 994 30May25 JG 1/1 (107770) | Negative | Band was not seen at 270bp, indicating the absence of mycoplasma. |
| Incubator 845 30May25 AP 1/1 (107769) | Negative | Band was not seen at 270bp, indicating the absence of mycoplasma. |
| Incubator 994 30May25 KC 1/1 (107767) | Negative | Band was not seen at 270bp, indicating the absence of mycoplasma. |
| Incubator 994 30May25 NM 1/1 (107766) | 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). |

| | | |
|---|--|---|
| 6/5/2025 | 6/5/2025 | 6/5/2025 |
| X Steph Dos Santos <hr/> Tech #1 Characterization Signed by: Dos Santos, Stephany | X John Raff <hr/> Tech #2 Characterization Signed by: Raff, John | X Dawn Graham <hr/> QA Review Quality Assurance Signed by: Graham, Dawn |

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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 #: 25050630
DATE RECEIVED: 22-May-25
TEST INITIATED: 27-May-25
TEST COMPLETED: 10-Jun-25

SAMPLE NAME / DESCRIPTION: BCHi013-A-1-DB68699
BCHi013-A-3-DB68700
BCHi014-A-10-DB68702
BCHi014-A-12-DB68703
BCHi014-A-9-DB68701
BCHi015-A-2-DB68704
BCHi015-A-3-DB68705
BCHi015-A-5-DB68706
BCHi016-A-1-DB68707
BCHi016-A-3-DB68708
BCHi017-A-7-DB68709
BCHi017-A-11-DB68711
BCHi017-A-9-DB68710
BCHi018-A-11-DB68714
BCHi018-A-7-DB68712
UNIQUE IDENTIFIER: N/A

TEST RESULTS:

| # Tested | # Positives (Growth) | - Control |
|----------|----------------------|-------------|
| 15 | 0 | 2 Negatives |

TEST SUMMARY:

| # Samples | Media Type | Volume (mL) | Incubation Temperature (° C) | Incubation Duration (Days) |
|-----------|------------|-------------|------------------------------|----------------------------|
| 15 | TSB | 40 | 20-25 | 14 |
| 15 | 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 # 25050630

AUTHORIZED BY

A handwritten signature in blue ink, consisting of several loops and a long horizontal stroke, positioned above a solid black horizontal line.

DATE

12 JUN 2025

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.