



# Certificate of Analysis

## Thaw and Culture Details

Cell Line Name	<b>HVRDi001-A</b>	
WiCell Lot Number	<b>WB67674</b>	
Parent Material	HVRDi001-A-WB66391	
Provider/Client	Brigham & Women's Hospital – Dr. Tracy Young-Pearse	
Banked By	WiCell	
Thaw and Culture Recommendations	WiCell recommends thawing 1 vial into 3 wells of a 6 well plate using mTeSR™ Plus and Matrigel®.	
Protocol	WiCell Feeder Independent Pluripotent Stem Cell Protocol	
Culture Platform Prior to Freeze	Medium: mTeSR™ Plus	Matrix: Matrigel®
Passage Number	p35 Cells were cultured for 34 passages prior to freeze and post colony selection. Plated cells at thaw should be labeled passage 35.	
Date Vialied	09-July-2021	
Vial Label	HVRDi001-A p35 WB67674	
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.	



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## 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><b>Results:</b> 46,XY,t(1;12)(q44;q22)[20] <b>Interpretation:</b> This is an abnormal karyotype. An apparently balanced translocation between the long (q) arm of chromosome 1 and the long arm of chromosome 12 is present in twenty of twenty cells examined. No other clonal abnormalities were detected at the stated band level of resolution. Comparison of this karyotype with the karyotype of the source (parental) specimen may be informative regarding the significance and origin of the apparently balanced translocation.</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™	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

## Testing Reported by Provider

The Provider stated that some or all of the additional analyses listed below may have been performed for this cell line. For more information, publication and dbGaP links, where available, are provided on the cell line specific web page on the WiCell website.

- Expression of MAP2, Tau and TuJ1, markers of upper (Cux1) and lower (Tbr1) layer cortical neurons and synaptic markers synaptophysin (SYP), PSD95 and VGLUT1 by immunostaining
- Embryoid body formation and in vitro differentiation to ectodermal, mesodermal, and endodermal lineage



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Approval Date	WiCell Quality Assurance Approval
26-August-2021	<p style="text-align: right;">8/26/2021</p> <p>X JKG</p> <p><small>JKG WiCell Quality Assurance Signed by Gay Jenna</small></p>

**Date Reported:** Monday, August 2, 2021

**Cell Line:** HVRDi001-A-WB67674

**Submitted Passage #:** 35

**Date of Sample:** 7/20/2021

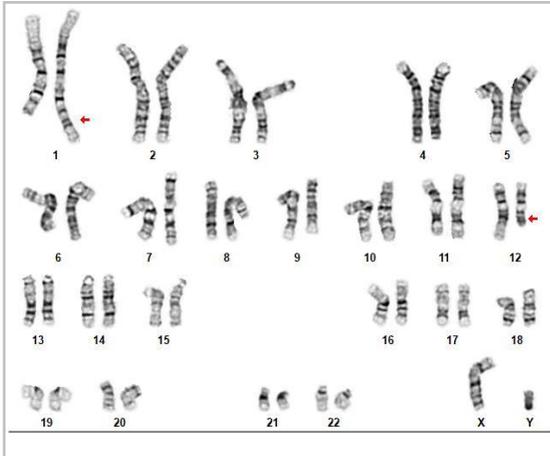
**Specimen:** Human iPSC

**Results:** 46,XY,t(1;12)(q44;q22)[20]

**Cell Line Sex:** Male

**Reason for Testing:** LOT\_RELEASE

**Investigator:** WiCell Stem Cell Bank, WiCell



**Cell:** 77

**Slide:** G03

**Slide Type:** Karyotype

**Total Counted:** 20

**Total Analyzed:** 8

**Total Karyogrammed:** 4

**Band Resolution:** 425 - 450

**Interpretation:**

**This is an abnormal karyotype. An apparently balanced translocation between the long (q) arm of chromosome 1 and the long arm of chromosome 12 is present in twenty of twenty cells examined. No other clonal abnormalities were detected at the stated band level of resolution.**

**Comparison of this karyotype with the karyotype of the source (parental) specimen may be informative regarding the significance and origin of the apparently balanced translocation.**

**Completed by:** Pam Mill

**Reviewed and Interpreted by:** Kaitlin C. Lenhart, Ph.D.

**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](http://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  
 Samples Received: 15Jul21, 16Jul21, 20Jul21  
 STR Amplification Date: 21Jul21

Form SOP-89.01  
 Version 6.0

Sample Name	PENN088i-854-7-DB34960 p16	PENN140i-M12-7-DB36335 p18	PENN158i-M12-4-DB36329 p20	UCSD239i-APP2-1-WB67672 p25	HVRDi001-A-WB67674 p35
Label on tube	87078	87079	87080	87113	87136
FGA	Identifying information has been redacted to protect donor confidentiality. If more information is required, please contact <a href="mailto:info@wicell.org">info@wicell.org</a>				
TPOX					
D8S1179					
vWA					
Amelogenin					
Penta_D					
CSF1PO					
D16S539					
D7S820					
D13S317					
D5S818					
Penta_E					
D18S51					
D21S11					
TH01					
D3S1358					
Allelic Polymorphisms	27	25	25	28	28
Matches*		87080	87079	67074, 67101, 68023, 75167	66403, 67688
Comments					

\*Note: The STR profile of the following sample is an exact match for the given sample/samples.



# Short Tandem Repeat

Requestor: WiCell Stem Cell Bank, WiCell  
Samples Received: 15Jul21, 16Jul21, 20Jul21  
STR Amplification Date: 21Jul21

Form SOP-89.01  
Version 6.0

**Assay Description:** STR analysis is performed using the PowerPlex 16 HS System by Promega™. Results are reported as 13 CODIS STR markers, Amelogenin for gender 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.

**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 suggests 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 ~2-5%.

7/27/2021	7/27/2021	7/27/2021
<b>X</b> Molly Miles	<b>X</b> Callum Walker	<b>X</b> Haley Bruner
Tech #1 Characterization Signed by: Miles, Molly	Tech #2 Characterization Signed by: Walker, Callum	QA Review Quality Assurance Signed by: Bruner, Haley

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*Raw data is available upon request.*



# Mycoplasma Assay Report

PCR-based assay performed by WiCell

WiCell  
29Jul21

FORM SOP-83.01

Version 3.0

Sample Name	Result	Interpretation
HVRDi001-A-WB67674 p35 (87136)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
INC123 22Jul21KR (87199)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
INC149 22Jul21MMM (87200)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
INC169 22Jul21JH 1/2 (87201)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
INC169 22Jul21JH 2/2 (87202)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
CREM017i-SS19-1-WB67673 p16 (87209)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
Positive (+) Control	Positive	
Negative (-) Control	Negative	

7/29/2021

7/29/2021

8/2/2021

**X** Molly Miles

Tech #1  
Characterization  
Signed by: Miles, Molly

**X** Katie Remondini

Tech #2  
Characterization  
Signed by: Remondini, Katie

**X** Dawn Graham

QA Review  
Quality Assurance  
Signed by: Graham Dawn

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*A gel image is available upon request.*

# Native Product Sterility Report



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

SAMPLE #: 21070812  
DATE RECEIVED: 14-Jul-21  
TEST INITIATED: 27-Jul-21  
TEST COMPLETED: 10-Aug-21

SAMPLE NAME / DESCRIPTION: CREM017i-SS19-1-WB67673  
PENNO42i-258-12-WB67671  
UCSD239i-APP2-1-WB67672  
STAN151i-303C3-DB35736  
STAN248i-617C1-DB35488  
STAN249i-617C2-DB35491  
WA01-WB67657  
WA01-WB67656  
STAN366i-282C2-WB67655  
SCRPF5803i-DB42982  
SCRPF6101i-DB42990  
SCRPF6904i-DB43007  
SCRPF7301i-DB43010  
HVRDi001-A-WB67674  
SCRPF8105i-DB43117  
SCRPF8305i-DB43120  
SCRPF8503i-DB43126  
SCRPF8601i-DB43129  
SCRPF8717i-DB43132  
SCRPF8901i-DB43135

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 # 21070812

REVIEWED BY \_\_\_\_\_

DATE 13 AUG 2021

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.