



Certificate of Analysis

Thaw and Culture Details

Cell Line Name	CREM017i-SS19-1	
WiCell Lot Number	WB67673	
Parent Material	CREM017i-SS19-1-DB48016	
Provider/Client	Boston University – Laboratory of Dr. Martin Steinberg	
Banked By	WiCell	
Thaw and Culture Recommendations	WiCell recommends thawing 1 vial into 2 wells of a 6 well plate using TeSR™-E8™ and Matrigel®.	
Protocol	WiCell Feeder Independent Pluripotent Stem Cell Protocol	
Culture Platform Prior to Freeze	Medium: TeSR™-E8™	Matrix: Matrigel®
Passage Number	p15 Cells were cultured for 14 passages prior to freeze and post colony selection. Plated cells at thaw should be labeled passage 15.	
Date Vialied	30-June-2021	
Vial Label	CREM017i-SS19-1 p15 WB67673	
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

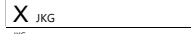
Results

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,XY 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	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.

- Digital Genome Sequencing
- Infinium® Expanded Multi-Ethnic Genotyping Array (MEGA^{EX})

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

Date Reported: Wednesday, August 4, 2021

Cell Line Sex: Male

Cell Line: CREM017i-SS19-1-WB67673

Reason for Testing: LOT_RELEASE

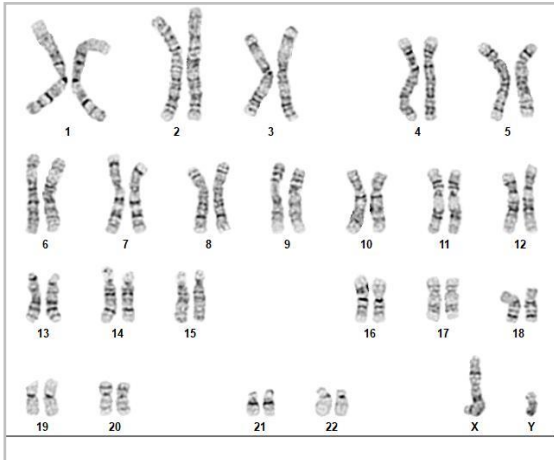
Submitted Passage #: 16

Date of Sample: 7/23/2021

Investigator: WiCell Stem Cell Bank, WiCell

Specimen: Human iPSC

Results: 46,XY



Cell: 87

Slide: G01

Slide Type: Karyotype

Total Counted: 20

Total Analyzed: 8

Total Karyogrammed: 4

Band Resolution: 475 - 525

Interpretation:

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

Completed by: Kate Bird, CG(ASCP)

Reviewed and Interpreted by: Vanessa Horner, PhD, FACMG

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

Samples Received: 23Jul21

STR Amplification Date: 26Jul21

Form SOP-89.01

Version 6.0

Sample Name	CREM017i- SS19-1- WB67673 p16
Label on tube	87209
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
Matches*	67766
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: 23Jul21

STR Amplification Date: 26Jul21

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 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%.

<p>X Hannah Rueth</p> <hr/> <p>Tech #1 Characterization Signed by: Rueth, Hannah</p>	<p>X Amber Kuhn</p> <hr/> <p>Tech #2 Characterization Signed by: Kuhn, Amber</p>	<p>X Dawn Graham</p> <hr/> <p>QA Review Quality Assurance Signed by: Graham, Dawn</p>
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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.