



Certificate of Analysis

Thaw and Culture Details

Cell Line Name	STAN249i-617C2	
WiCell Lot Number	DB35491	
Provider/Client	Stanford University – Laboratory of Dr. Thomas Queternous	
Banked By	Icahn School of Medicine at Mount Sinai Stem Cell Core	
Thaw and Culture Recommendations	WiCell recommends thawing 1 vial into 2 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: mTeSR™ 1	Matrix: Matrigel®
Passage Number	p13 Cells were cultured for 13 passages prior to freeze and post colony selection. Plated cells at thaw should be labeled passage 14.	
Date Vialled	10-December-2015	
Vial Label	ISSMS 617i C2P13 ITA 121015	
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,dup(20)(q11.2q11.2)[2]/46,XX[16] Nonclonal findings: 47,XX,+12,dup(20)(q11.2q11.2) 47,XX,+13,dup(20)(q11.2q11.2) Interpretation: This is an abnormal karyotype. There is an interstitial duplication in the long (q) arm of chromosome 20 in four of twenty cells examined. There is a known recurrent acquired duplication at this location in human pluripotent stem cell cultures; we recommend that this abnormality be confirmed by higher resolution testing. No other clonal abnormalities were detected at the stated band level of resolution.</p> <p>There are nonclonal findings, listed above, one of which contains a chromosomal aberration (gain of chromosome 12) recurrently acquired in pluripotent stem cell cultures. Nonclonal findings may result from technical artifact, but may be due to a developing clonal abnormality or to low-level mosaicism.</p>			
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

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.

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



Certificate of Analysis

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

Date Reported: Thursday, June 17, 2021

Cell Line Sex: Female

Cell Line: STAN249i-617C2-DB35491

Reason for Testing: LOT_RELEASE

Submitted Passage #: 15

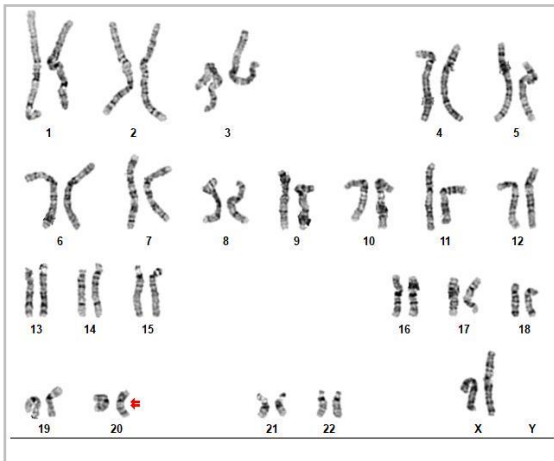
Date of Sample: 6/3/2021

Investigator: WiCell Stem Cell Bank, WiCell

Specimen: Human iPSC

Results: 46,XX,dup(20)(q11.2q11.2)[2]/46,XX[16]

Nonclonal findings: 47,XX,+12,dup(20)(q11.2q11.2) 47,XX,+13,dup(20)(q11.2q11.2)



Cell: 63

Slide: G02

Slide Type: Karyotype

Total Counted: 20

Total Analyzed: 8

Total Karyogrammed: 5

Band Resolution: 425 - 550

Interpretation:

This is an abnormal karyotype. There is an interstitial duplication in the long (q) arm of chromosome 20 in four of twenty cells examined. There is a known recurrent acquired duplication at this location in human pluripotent stem cell cultures; we recommend that this abnormality be confirmed by higher resolution testing. No other clonal abnormalities were detected at the stated band level of resolution.

There are nonclonal findings, listed above, one of which contains a chromosomal aberration (gain of chromosome 12) recurrently acquired in pluripotent stem cell cultures. Nonclonal findings may result from technical artifact, but may be due to a developing clonal abnormality or to low-level mosaicism.

Completed by: Dawn Davis, 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: 03Jun21, 04Jun21

STR Amplification Date: 07Jun21

Form SOP-89.01

Version 5.0

Sample Name	STAN249i-617C2-DB35491 p15	STAN151i-303C3-DB35736 p18	STAN248i-617C1-DB35488 p15	PENN122i-627-5-DB36632 p15
Label on tube	86519	86540	86541	86542
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	27	27	27	28
Matches*				
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: 03Jun21, 04Jun21

STR Amplification Date: 07Jun21

Form SOP-89.01

Version 5.0

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 27-28 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%.

6/9/2021	6/10/2021	6/10/2021
X Callum Walker	X Amber Kuhn	X Dawn Graham
Tech #1 Characterization Signed by: Walker, Callum	Tech #2 Characterization Signed by: Kuhn, Amber	QA Review Quality Assurance Signed by: Graham, Dawn

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Raw data is available upon request.



Mycoplasma Assay Report

PCR-based assay performed by WiCell

WiCell
01Jun21

FORM SOP-83.01

Version 3.0

Sample Name	Result	Interpretation
STAN151i-303C3-DB35736 p16 (86448)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
STAN248i-617C1-DB35488 p14 (86449)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
STAN249i-617C2-DB35491 p14 (86450)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
Positive (+) Control	Positive	
Negative (-) Control	Negative	

6/1/2021

6/2/2021

6/3/2021

X Hannah Rueth

Tech #1
Characterization
Signed by: Rueth, Hannah

X Callum Walker

Tech #2
Characterization
Signed by: Walker, Callum

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.