Certificate of Analysis

Thaw and Culture Details

Cell Line Name	**UCSD247i-LQT1-2**	
WiCell Lot Number	**DB68095**	
Provider/Client	University of California, San Diego – Dr. Kelly Frazer	
Banked By	University of California, San Diego – Dr. Kelly Frazer	
Thaw and Culture Recommendations	WiCell recommends thawing 1 vial into 1 well of a 6 well plate using mTeSR™1 and Cultrex®. WiCell recommends thawing with ROCK Inhibitor.	
Protocol	WiCell Feeder Independent Pluripotent Stem Cell Protocol	
Culture Platform Prior to Freeze	Medium: mTeSR™1	Matrix: Matrigel®
Passage Number	p21 Cells were cultured for 21 passages prior to freeze and post colony selection. Plated cells at thaw should be labeled passage 22.	
Date Vialed	15-November-2022	
Vial Label	LQT1_2_116 P21 NSS_20221115	
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,dup(20)(q11.2q11.2)[12]/46,XX[7] Nonclonal findings: 47,XX,dup(20)(q11.2q11.2),+mar ***Interpretation:*** This is an abnormal karyotype. There is an interstitial duplication in the long (q) arm of chromosome 20 in thirteen 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 is a nonclonal finding, listed above. Nonclonal findings may result from technical artifact, but may be due to a developing clonal abnormality or to low-level mosaicism.		
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

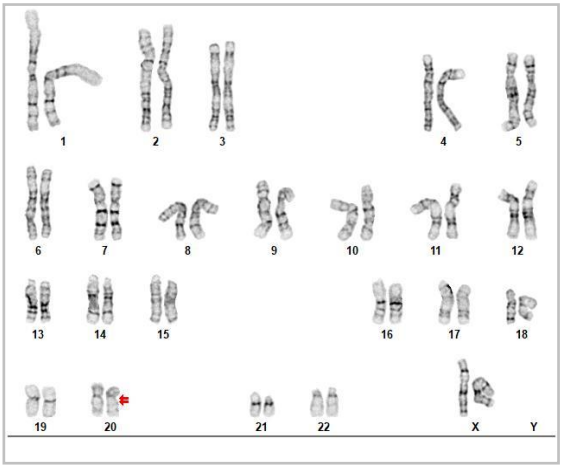
Approval Date	WiCell Quality Assurance Approval
30-November-2023	11/30/2023 X Hunter Hefti HH WiCell Quality Assurance Signed by: Hefti, Hunter

Chromosome Analysis Report: 097709

Date Reported: Friday, June 30, 2023
Cell Line: UCSD247i-LQT1-2-DB68095
Submitted Passage #: 24
Date of Sample: 6/23/2023
Specimen: Human Modified iPSC
Results: 46,XX,dup(20)(q11.2q11.2)[12]/46,XX[7]

Cell Line Sex: Female
Reason for Testing: LOT_RELEASE
Investigator: WiCell Stem Cell Bank, WiCell

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



Cell: 22
Slide: G01
Slide Type: Karyotype

Total Counted: 20
Total Analyzed: 9
Total Karyogrammed: 5
Band Resolution: 425 - 500

Interpretation:

This is an abnormal karyotype. There is an interstitial duplication in the long (q) arm of chromosome 20 in thirteen 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 is a nonclonal finding, listed above. Nonclonal findings may result from technical artifact, but may be due to a developing clonal abnormality or to low-level mosaicism.

Completed by: Jennifer Pecos, CG(ASCP)
Reviewed and Interpreted by: Vanessa Horner 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".

Short Tandem Repeat

Requestor: WiCell Stem Cell Bank, WiCell
Samples Received: 07Jul23, 29Jun23, 23Jun23
STR Amplification Date: 09Jul23

Sample Name	WIC-WA09-MB-004 p28	H1-Fucci-DB68086 p37	UCSD247i-LQT1-2-DB68095 p24
WiCell CTR No.[1]	97827	97757	97709
FGA	[redacted]	[redacted]	[redacted]
TPOX			
D8S1179			
vWA			
Amelogenin			
Penta_D			
CSF1PO			
D16S539			
D7S820			
D13S317			
D5S818			
Penta_E			
D18S51			
D21S11			
TH01			
D3S1358			
Allelic Polymorphisms	24	28	26
Matches*	See Matches Comment	See Matches Comment	73192, 72296, 72297, 72643, 97621
Comments			

Identifying information has been redacted to protect donor confidentiality. If more information is required, please contact info@wicell.org

**Note: The STR profile of the following sample is a 100% match for the given sample/samples unless otherwise specified.*

[1] CTR No.: Characterization Test Request Number; also known as a laboratory accessioning number.

Short Tandem Repeat

Requestor: WiCell Stem Cell Bank, WiCell
Samples Received: 07Jul23, 29Jun23, 23Jun23
STR Amplification Date: 09Jul23

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 24 - 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 ~2-4%.

Matches:
Sample 97827 is a 100% match to 97437, 97371, 97171, 96184, 96183, 95823, 95822, 93654, 93595, 92908 and additional profiles. Additional matches can be provided upon request.

Sample 97757 is a 100% match to 96488, 96463, 94744, 94743, 93806, 86570, 86550, 82881, 82204, 82128 and additional profiles. Additional matches can be provided upon request.

7/10/2023 X Justin Hobson Tech #1 Characterization Signed by: Hobson, Justin	7/11/2023 X Amber Kuhn Tech #2 Characterization Signed by: Kuhn, Amber	7/11/2023 X Andy Arntz QA Review Quality Assurance Signed by: Arntz, Andy

Mycoplasma Assay Report

PCR-based assay performed by WiCell
WiCell Stem Cell Bank, WiCell
13June23

Sample Name	Result	Interpretation
UCSD247i-LQT1-2-DB68095 p22 (97566)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
UCSD182i-3-2-DB68096 p28 (97565)	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).

6/13/2023 X Cheyenne Boatman Tech #1 Characterization Signed by: Boatman, Cheyenne	6/14/2023 X Amber Kuhn Tech #2 Characterization Signed by: Kuhn, Amber	6/14/2023 X Dawn Graham QA Review Quality Assurance Signed by: Graham, Dawn

A gel image is available upon request.

Native Product Sterility Report

STERIS

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

SAMPLE #:	23040601
DATE RECEIVED:	13-Apr-23
TEST INITIATED:	14-Apr-23
TEST COMPLETED:	28-Apr-23

SAMPLE NAME / DESCRIPTION:

PACS2iPS01-C5-DB68076
WA09-WB68097
HES7-NLuc-2A-tdtomato-DB68082
H9 T-2A-EGFP-PGK-DB68085
H1-Fucci-DB68086
H1 MYH11-NLuc-tdTomato-DB68087
HES7-NLuc-2A-tdtomato-DB68090
JHU255i-DB37129
JHU256i-DB37132
JHU257i-DB37136
UCSD242i-LQT1-1-DB68089
UCSD243i-LQT3-1-DB68091
UCSD244i-LQT3-2-DB68092
UCSD245i-CNTL-1-DB68093
UCSD246i-CNTL-2-DB68094
UCSD247i-LQT1-2-DB68095
UCSD182i-3-2-DB68096
JHU252i-DB37121
JHU013i-2-DB40951
JHU022i-DB40963

UNIQUE IDENTIFIER: N/A

TEST RESULTS:

# Tested	# Positives (Growth)	- Control
20	1	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

Native Product Sterility Report

STERIS

REFERENCE: Processed according to LAB-003: Sterility Test Procedure

PD #: 000053

TEST METHODOLOGY: USP - Direct Transfer

COMMENTS: Sample #23040601

Sample labeled H1myh11 c5 p28 5cm2 jab 28AUG17 is positive for both TSB and FTG media.

AUTHORIZED BY _____ DATE 09MAY2023