

Thaw and Culture Details

Cell Line Name	STAN002i-161-1						
WiCell Lot Number	DB31139						
Provider	Stanford University – Laboratory of D	Stanford University – Laboratory of Dr. Marlene Rabinovitch					
Banked By	Stanford University – Laboratory of D	r. Marlene Rabinovitch					
Thaw and Culture Recommendations	WiCell recommends thawing 1 vial into 1 well of a 6 well plate.						
Culture Platform	Feeder Independent						
	Medium: E8						
	Matrix: Matrigel®						
Protocol	WiCell Feeder Independent E8 Medium Protocol						
Passage Number	p10 These cells were cultured for 10 passages prior to freeze and post reprogramming. Add +1 to the passage number to best represent the overall passage number of the cells at thaw.						
Date Vialed	10-June-2015						
Vial Label	06/10/2015E 161D####-###ip 161FSVNOC1 P10V##########						
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.						

Testing Performed by WiCell

Test Description	Test Provider	Test Method	Test Specification	Result
Post-Thaw Viable Cell Recovery	WiCell	SOP-CH-305	Recoverable attachment after passage	Pass
Identity by STR	UW Translational Research Initiatives in Pathology Laboratory	PowerPlex 16 HS System by Promega	Defines profile	Pass
Sterility	Biotest Laboratories	ST/07	Negative	Pass
Mycoplasma	WiCell	SOP-QU-004	Negative	Pass
Karyotype by G-banding	WiCell	SOP-CH-003	Report karyotype	Pass

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.



Testing Reported by Provider

Test Description	Method	Result
Identity	SNP	iPSCs match the donor material
Mycoplasma	Lonza MycoAlert [™] kit	Negative

The Provider stated that the additional analysis 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. -

Infinium[®] Expanded Multi-Ethnic Genotyping Array (MEGA^{EX})

Approval Date	Quality Assurance Approval			
	9/8/2016			
04-June-2016	Хамк			
	JKG Quality Assurance Signed by: Klade, Anjelica			

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Short Tandem Repeat Analysis

Department of Pathology and Laboratory Medicine TRIP Laboratory (Molecular) http://www.pathology.wisc.edu/research/trip

Sample Report: 11744-STR Sample Name on Tube: 17744-STR 87.3 ng/μL, (A260/280=1.91) Sample Type: Cells Cell Count: ~2 million cells

Requestor: WiCell Research Institute Quality Department



Sample Date: N/A Receive Date: 08/22/16 Assay Date: 08/23/16 File Name: 160825 str jam Report Date: 08/26/16 revised: 08/31/16

STR Locus	STR Genotype Repeat #	STR Genotype
FGA	16–18,18.2,19,19.2,20,20.2,21,21.2,22, 22.2, 23, 23.2, 24, 24.2, 25, 25.2, 26–30, 31.2, 43.2, 44.2,45.2, 46.2	Identifying information has
ТРОХ	6-13	been redacted to
D8S1179	7-18	protect donor
vWA	10-22	confidentiality. If
Amelogenin	X,Y	more information is required,
Penta_D	2.2, 3.2, 5, 7-17	please, contact
CSF1PO	6-15	WiCell's Technical
D16S539	5, 8-15	Support.
D7S820	6-14	
D13S317	7-15	
D5S818	7-16	
Penta_E	5-24	
D18S51	8-10, 10.2, 11-13, 13.2, 14-27	
D21S11	24,24.2,25,25.2,26-28,28.2,29,29.2, 30, 30.2,31, 31.2,32,32.2,33,33.2, 34,34.2,35,35.2,36-38	
TH01	4-9,9.3,10-11,13.3	
D3S1358	12-20	

<u>Results:</u> Based on the 11744-STR (report label changed per JG 08/30/16) cells submitted by WiCell QA dated and received 08/22/16, this sample (Label on Tube: 17744-STR) defines the STR profile of the human stem cell line STAN002i-161-1 comprising 27 allelic polymorphisms across the 15 STR loci analyzed.

<u>Interpretation</u>: No STR polymorphisms other than those corresponding to the human STAN002i-161-1 stem cell line were detected and 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. This result suggests that the 11744-STR sample submitted corresponds to the STAN002i-161-1 stem cell line and was not contaminated with any other human stem cells or a significant amount of mouse feeder layer cells.

<u>Sensitivity</u>: Sensitivity limits for detection of STR polymorphisms unique to either this or other human stem cell lines is ~2-5%.

X <i>RMB</i> Digitally Signed on 08/31/16	X WMR Digitally Signed on 08/31/16
TRIP Laboratory, Molecular	, PhD, Director / Co-Director UWHC Molecular Diagnostics Laboratory / UWSMPH TRIP Laborator

Testing was accomplished by analysis of human genetic polymorphisms at STR loci. This methodology has not yet been approved by the FDA and is for investigational use only. Acknowledge TRIP in your publications, posters & presentations. For details, see: http://www.pathology.wisc.edu/research/trip/acknowledging TRIP agrees to maintain the confidentiality of any information provided to it in connection with its performance of this STR analysis on the same conditions as set forth in paragraph 2 of WiCell's Terms and Conditions of Service (http://www.wicell.org/media.acux/1a429b84-2b54-44a4-8ad8-5c05db93dd8a).

Sterility Report

Making life-saving products possible

ertainty of measurement associated with the measurement result reported in this certificate is available from the organization upon request

Biotest Laboratories # 9303 West Broadway Ave. # Brooklyn Park, MN 55445 # USA # (763) 315-1200

A subsidiary of STERIS Corporation

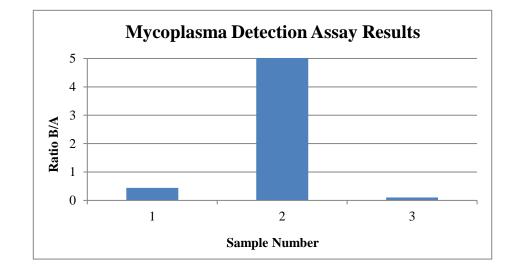
STERIS



Mycoplasma Detection Assay Report Testing Performed by WiCell

Testing Performed by WiCell Lot Release Test August 5th, 2016 FORM SOP-QU-004.01 Version F Edition 01 Reported by: SM Reviewed by: JB Berthold Flash n' Glo 539

		Reading A A		Α	Reading B		В	Ratio		
#	Sample Name	RLU1	RLU2	Ave	RLU1	RLU2	Ave	B/A	Result	Comments/Suggestions
1	STAN002i-161-1-DB31139 11774	96	95	95.5	42	42	42	0.44	Negative	
2	Positive (+) Control	373	381	377	8464	8514	8489	22.52	Positive	
3	Negative (-) Control	237	244	240.5	26	24	25	0.10	Negative	





Date Reported: Wednesday, August 10, 2016 Cell Line: STAN002i-161-1-DB31139 11774 Passage#: 12 Date of Sample: 8/5/2016 Specimen: iPSC Results: 46,XY Cell: 29 Slide: 2 Slide Type: Karyotype

O B H

8

Total Counted: 20 Total Analyzed: 8 Total Karyogrammed: 4 Band Resolution: 475 - 575

WiCell CDM

Interpretation:

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19

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

Completed by:, CG(ASCP)Reviewed and Interpreted by:PhD, FACMG

A signed copy of this report is available upon request.

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Date:	Sent By:	Sent To:	QC Review By:
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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 may not be relied upon by any other party without the prior written consent of the Director of the WiCell Cytogenetics Laboratory. The results of this assay are for research use only. If the results of this assay are to be used for any other purpose, contact the Director of the WiCell Cytogenetics Laboratory.

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