

Product Information

Product Name	UWWC1-DS2U
Alias	DS2U
Lot Number	WB17714
Depositor	University of Wisconsin – Laboratory of Anita Bhattacharyya
Banked by	WiCell
Thaw Recommendation	Thaw 1 vial into 4 wells of a 6 well plate.
Culture Platform	Feeder Independent
	Medium: mTeSR1
	Matrix: Matrigel
Protocol	WiCell Feeder Independent Protocol
Passage Number	p66
	These cells were cultured for 65 passages prior to freeze, 5 of them in mTeSR1/Matrigel. WiCell adds +1 to the passage number at freeze so that the number on the vial best represents the overall passage number of the cells at thaw.
Date Vialed	05-March-2015
Vial Label	UWWC1-DS2U
	p66 WB17714
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	 ≥ 15 Undifferentiated Colonies, ≤ 30% Differentiation and 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	Expected karyotype	Pass

Date of Lot Release	Quality Assurance Approval				
27-July-2015	7/27/2015 AMK Quality Assurance Signed by:				

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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.



Short Tandem Repeat Analysis

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

Sample Report: 11228-STR Sample Name on Tube: 11228-STR 144.3 ng/µL, (A260/280=1.90) Sample Type: Cells Cell Count: ~2 million cells **Requestor:** WiCell Research Institute Quality Department WiCell® info@wicell.org (888) 204-1782

Sample Date: N/A Receive Date: 04/20/15 Assay Date: 04/21/15 File Name: STR_150422_wmr Report Date: 04/27/15

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 COnfig					
Amelogenin	X,Y	more information				
Penta_D	2.2, 3.2, 5, 7-17	is required, 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 11228-STR cells submitted by WiCell QA dated and received on 04/20/15, this sample (Label on Tube: 11228-STR) defines the STR profile of the human stem cell line UWWC1-DS2U comprising 29 allelic polymorphisms across the 15 STR loci analyzed.

<u>Interpretation</u>: No STR polymorphisms other than those corresponding to the human UWWC1-DS2U 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 11228-STR sample submitted corresponds to the UWWC1-DS2U 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 04/27/15	X WMR Digitally Signed on 04/27/15
TRIP Laboratory, Molecular	, PhD, Director / Co-Director UWHC Molecular Diagnostics Laboratory / UWSMPH TRIP Laboratory

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 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.

Biotest Laboratories, Inc.

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WiCell Research Institute,	Inc.	BIOTEST SAMPLE #	15040038			
WiCell Quality Assurance		VALIDATION #	NG			
		TEST PURPOSE	NG			
PRODUCT	UWWC1-2DS3-WB17713 11202 WIC01i-02-1c-WB17715 11203 UWWC1-DS1-WB17810 11204 UWWC1-DS2U-WB17714 11205 WC-3801-2-WB17984 11206 WC006i-FX11-9U-WB18069 11207 WC-3902-10-RS-WB16861 11208 WC-3902-08-RS-WB17010 11209 RUES2-DB17752 11210 RUES1-DB17210 11211					
	RUES2-DB17752 is labeled as R2 p2 RUES1-DB17210 is labeled as R1 p2					
PRODUCT LOT	NA					
STERILE LOT	NA	BI LOT	NA			
STERILIZATION LOT	NA	BI EXPIRATION DATE NA				
STERILIZATION DATE	NA	DATE RECEIVED	2015-04-01			
STERILIZATION METHOD	NA	TEST INITIATED	2015-04-02			
SAMPLING BLDG / ROOM	NA	TEST COMPLETED	2015-04-16			
REFERENCE	Processed according to LAB-003: Sterility Test Procedure					
	Ten (10) products were each divided between 40 mL TSB and 40 mL FTG. The samples were then cultured at 20-25 C and 30-35 C respectively and were monitored for a minimum of 14 days.					
	USP BI Manufacturers Specifications Other					
RESULTS Sterile	# POSITIVES # TESTED 0 10	POSITIVE CONTF NA	ROL NEGATIVE CONTROL 2 Negatives			

Specific test results may not be indicative of the characteristics of any other samples from the same lot or similar lots. Liability is limited to the costs of the tests,

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Form: M-002 rev. 11 Effective:



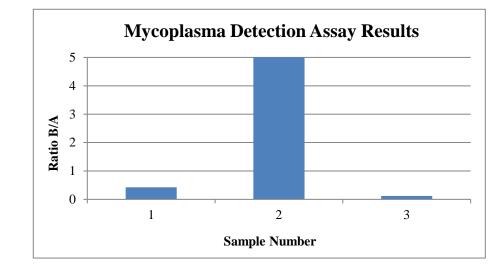




Mycoplasma Detection Assay Report Testing Performed by WiCell

Testing Performed by WiCell Lot Release Test 03-20-2015 FORM SOP-QU-004.01 Version D Edition 01 Reported by: SS Reviewed by: DF Berthold Flash n' Glo 539

		Read	ing A	Α	Read	ing B	В	Ratio		
#	Sample Name	RLU1	RLU2	Ave	RLU1	RLU2	Ave	B/A	Result	Comments/Suggestions
1	UWWC1-DS2U-WB17714 11186	177	169	173	74	72	73	0.42	Negative	
2	Positive (+) Control	215	208	211.5	22447	22429	22438	106.09	Positive	
3	Negative (-) Control	544	538	541	64	69	66.5	0.12	Negative	





Cell Line Gender: Male

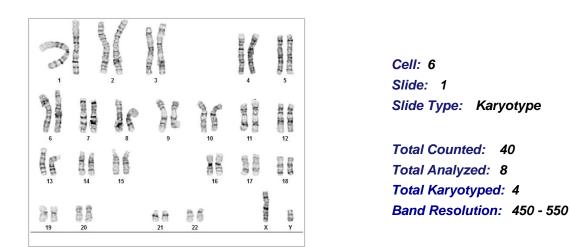
Investigator:

Reason for Testing: lot release testing

CDM

Date Reported: Monday, March 23, 2015 Cell Line: UWWC1-DS2U-WB17714 11186 Passage#: 67 Date of Sample: 3/13/2015 Specimen: iPSC Results: 46,XY

Nonclonal findings: 47,XY,+8



Interpretation:

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

There is one nonclonal finding, listed above. Standard analysis requires that chromosomes are counted in twenty cells. Twenty additional cells were examined with no further evidence of this nonclonal aberration. Nonclonal findings likely result from technical artifact, but may be due to a developing clonal abnormality or to low-level mosaicism.

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

A signed copy of this report is available upon request.

 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 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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