



Thaw and Culture Details

Cell Line Name	RUES3
WiCell Lot Number	WB66807
Parent Material	RUES3-DB18144
Provider	The Rockefeller University - Laboratory of Dr. Ali Brivanlou
Banked By	WiCell
Thaw and Culture Recommendations	WiCell recommends thawing 1 vial into 3 wells of a 6 well plate.
Culture Platform	Feeder Independent
	Medium: mTeSR™1
	Matrix: Matrigel®
Protocol	WiCell Feeder Independent mTeSR™1 Protocol
Passage Number	p14 These cells were cultured for 13 passages prior to freeze. WiCell adds +1 to the passage number at freeze to best represent what the overall passage number of the cells at thaw. Plated cells at thaw should be labeled passage 14
Date Vialied	18-May-2018
Vial Label	RUES3 p14 WB66807
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
Karyotype by G-banding	WiCell	SOP-CH-003	Expected karyotype	See Report
	<p>Results: 46,XY Nonclonal findings: 48,XY,+19,+19 Interpretation: This is a normal karyotype; no clonal abnormalities were detected at the stated band level of resolution. There is a nonclonal finding, listed above, which contains a chromosomal aberration (tetrasomy of chromosome 19) not considered recurrently acquired in cultures of this cell type. Nonclonal findings likely 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	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	Consistent with known profile	Pass
Sterility	Steris	ST/07	Negative	Pass
Mycoplasma	WiCell	SOP-QU-004	Negative	Pass



Approval Date	Quality Assurance Approval
17-July-2018	<p style="text-align: right;">8/29/2018</p> <p>X <u>JKG</u></p> <p><small>JKG Quality Assurance Signed by Gay, Jenna</small></p>

Date Reported: Monday, June 11, 2018

Cell Line: RUES3-WB66807 13776

Passage#: 14

Date of Sample: 6/5/2018

Specimen: Human ES

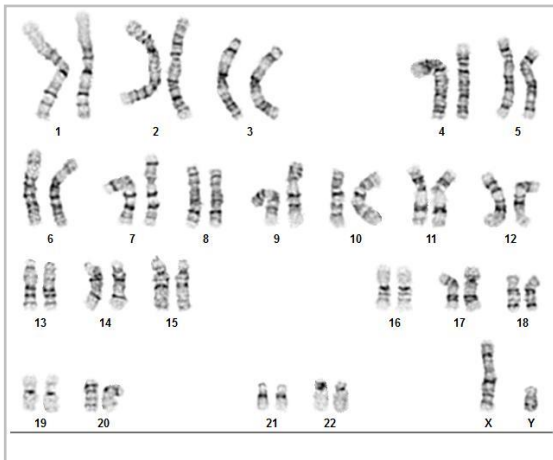
Results: 46,XY

Cell Line Sex: Male

Reason for Testing: lot release testing

Investigator: [REDACTED], WiCell

Nonclonal findings: 48,XY,+19,+19



Cell: 75

Slide: G01

Slide Type: Karyotype

Total Counted: 20

Total Analyzed: 8

Total Karyogrammed: 4

Band Resolution: 350 - 500

Interpretation:

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

There is a nonclonal finding, listed above, which contains a chromosomal aberration (tetrasomy of chromosome 19) not considered recurrently acquired in cultures of this cell type. Nonclonal findings likely result from technical artifact, but may be due to a developing clonal abnormality or to low-level mosaicism.

Completed by: [REDACTED], CG(ASCP)

Reviewed and Interpreted by: [REDACTED], 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 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.

Sample Report:

13776-STR

Sample Name on Tube: 13776-STR

72.4 ng/μL, (A260/280=1.84)

Sample Type: Cells

Cell Count: ~2 million cells

Requestor:

WiCell Research Institute

Quality Department

Sample Date: N/A

Receive Date: 06/11/18

Assay Date: 06/12/18

File Name: STR 180613 wmr repeat

Report Date: 06/14/18

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	20,24
TPOX	6-13	8,11
D8S1179	7-18	10,14
vWA	10-22	16,17
Amelogenin	X,Y	X,Y
Penta_D	2.2, 3.2, 5, 7-17	9,11
CSF1PO	6-15	9,11
D16S539	5, 8-15	12,13
D7S820	6-14	8,10
D13S317	7-15	8,12
D5S818	7-16	11,13
Penta_E	5-24	12,15
D18S51	8-10, 10.2, 11-13, 13.2, 14-27	12,19
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	30,30
TH01	4-9,9.3,10-11,13.3	8,9
D3S1358	12-20	16,18

Results: Based on the 13776-STR cells submitted by WiCell QA dated and received on 06/11/18, this sample (Label on Tube: 13776-STR) matches the STR profile of the human stem cell line RUES3 with the exception of the D18S51 loci (12,19) where in RUES3 (11283-STR) 12,18,19 was observed. Standards for cell line authentication have been promoted with suggested algorithms to determine degrees of “relatedness” and have been recommended as a simple and effective way to interpret results from STR profiling of human cell lines. In general, ≥80% match is common between related samples, whereas ≤ 50% match is unrelated (Int. J. Cancer: 132, 2510-2519. 2013). Using this criteria, across the 15 microsatellite STR loci, determined 13776-STR sample displays a 16/17 allelic match (94% match), thus we would call this sample a match to RUES3 (11283-STR). This line is comprised of 29 allelic polymorphisms across the 15 STR loci analyzed.

Interpretation: No STR polymorphisms other than those corresponding to the human RUES3 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 13776-STR sample submitted corresponds to the RUES3 stem cell line and was not contaminated with any other human stem 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 stem cell lines is ~2-5%.

X *RMB*

Digitally Signed on 06/14/18

X *WMR*

Digitally Signed on 06/14/18

BA
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>

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>).

Native Product Sterility Report



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

SAMPLE #: 18052304
DATE RECEIVED: 31-May-18
TEST INITIATED: 22-Jun-18
TEST COMPLETED: 06-Jul-18

SAMPLE NAME / DESCRIPTION: SCRP6703i WB66803 13763
RUES3 WB66807 13764
RUES1 WB66808 13765
WC007i-FX13-2 WB66809 13766
MCW001i-40001487 DB66306 13767
MCW007i-U2456 DB66312 13768
MCW009i-40002262 DB66314 13770
MCW031i-A3202 WB66537 13771
MCW077i-40001579 WB66500 13772
MCW076i-U2129 WB66507 13773

UNIQUE IDENTIFIER: NA
PRODUCT REGISTRATION: Other: Human iPS cells

TEST RESULTS:

# Tested	# Positives (Growth)	- Control
10	0	2 Negatives

TEST SUMMARY:

# Samples	Media Type	Volume (mL)	Incubation Temperature (° C)	Incubation Duration (Days)
10	TSB	40	20 - 25	14
10	FTG	40	30 - 35	14

REFERENCE: Processed according to LAB-003: Sterility Test Procedure
METHOD VALIDATION / PD #: 000053
TEST METHODOLOGY: USP - Direct Transfer

COMMENTS: NA

REVIEWED BY

Olson

DATE

09 JUL 18

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.



Mycoplasma Detection Assay Report

Testing Performed by WiCell

Lot Release Testing

June 06, 2018

FORM SOP-QU-004.01

Version G Edition 02

Reported by: AP

Reviewed by: DF

BD Monolight 180

#	Sample Name	Reading A			Reading B			Ratio B/A	Result	Comments/Suggestions
		RLU1	RLU2	Ave	RLU1	RLU2	Ave			
1	RUES3-WB66807 13776	393	363	378	133	136	134.5	0.36	Negative	
2	Positive (+) Control	514	506	510	23265	23449	23357	45.80	Positive	
3	Negative (-) Control	928	979	953.5	88	92	90	0.09	Negative	

