

**Product Information and Testing**  
for  
**Material Produced by Depositor**

Product Name	RUES3	
WiCell Lot Number	DB18144	
Depositor	The Rockefeller University - Laboratory of Dr. Ali Brivanlou	
Banked by	The Rockefeller University - Laboratory of Dr. Ali Brivanlou	
Culture Platform	<u>Culture Platform Prior to Freeze</u> Medium: Conditioned Medium Matrix: Laminin-521	<u>Thaw Recommendation</u> Medium: mTeSR1 Matrix: Matrigel Thaw 1 vial into 2 wells of a 6 well plate.
Protocol	WiCell recommends using our WiCell Feeder Independent mTeSR1 Protocol when thawing these cells.  The protocol provided by the depositor is available upon request.	
Passage Number	p9  These cells were cultured for 8 passages prior to freeze, 1 of them in Conditioned Medium/Laminin-521. The Depositor 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 Viald	10-March-2015	
Vial Label	RUES3 p9 3/10/15 LP	
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.	

**Product Information**

**Testing Reported by Depositor**

Test Description	Result	Report
Karyotype	Normal	Attached
Mycoplasma	Negative	Attached
Oct 3/4	Present	Not Available
SSEA4	Present	Not Available
Nanog	Present	Not Available
Teratoma	3 germ layers	Not Available

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**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
03-June-2015	8/6/2015  X AMK AMK Quality Assurance Signed by: [REDACTED]

**Cell Line ID:** Rues3

**Passage #:** 7

**Specimen Type:** Human ESC Culture

**Indication for Study:** Routine Culture QC

**Test Code:** 100

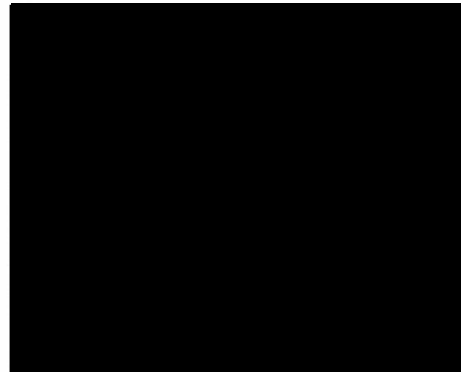
**Account #:** NA

**PO #:** 321498

**Date Received:** 5/1/13

**Date Reported:** 5/14/13

**Time in Culture:** 1 day



**Additional copies sent to:**

**Banding Technique:** GTL

**Band Resolution:** Good

**Metaphases Counted:** 20    **Analyzed:** 7    **Karyotyped:** 2

**RESULTS:** 46,XY[18]

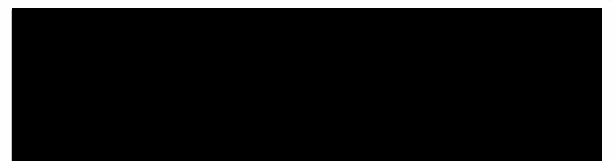
Apparently NORMAL Male Human Karyotype

**Non-clonal Aberrations:** 45,XY,-15[1]

46,XY,i(7)(p10)[1]

### INTERPRETATION:

Cytogenetic analysis was performed on twenty G-banded metaphase cells from human cell line Rues3 p7. Eighteen cells demonstrated an apparently normal male karyotype, while two cells demonstrated non-clonal chromosome aberrations (listed above) which are most likely artifacts of culture. No abnormal cells with trisomy 12 and/or 17 were detected.



Mycoplasma Test Date: 03/11/2015

Code	Sample Value	Comments	Media Control Sample	NOTES:
72	0.48	Media Control - No mycoplasma is detected.	N/A	A These results come from the The MycoAlert™ PLUS Assay (Lonza), a selective and sensitive biochemical test which detects the activity of specific mycoplasmal enzymes.
73	1.28	Media Control - This media increases the background of this assay.	N/A	
74	1.11	No mycoplasma is detected.	73	

Sample 74 is  
RUES3 p8

# Short Tandem Repeat Analysis

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

WiCell®  
info@wicell.org  
(888) 204-1782

**Sample Report:**

11283-STR  
**Sample Name on Tube:** 11283-STR  
183.7 ng/μL, (A260/280=1.94)  
**Sample Type:** Cells  
**Cell Count:** ~2 million cells

**Requestor:**

WiCell Research Institute  
Quality Department

**Sample Date:** N/A

**Receive Date:** 05/22/15  
**Assay Date:** 05/26/15  
**File Name:** 150528 STR JAM  
**Report Date:** 06/02/15

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	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	12,18,19
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 11283-STR cells submitted by WiCell QA dated and received on 05/22/15, this sample (Label on Tube: 11283-STR) defines the STR profile of the human stem cell line RUES3 comprising 30 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, including a triploid genotype at the D18S51 loci. This observation could be the result of chromosomal gains, losses and/or amplifications in this cell line. 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 11283-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 06/02/15

TRIP Laboratory, Molecular

**X** *WMR*

Digitally Signed on 06/02/15

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>

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# Sterility Report

Biotest Laboratories, Inc.

*Making life-saving products possible*

WiCell Research Institute, Inc.  
WiCell Quality Assurance



BIOTEST SAMPLE # 15050336  
VALIDATION # NG  
TEST PURPOSE NG

PRODUCT  
WIP05i-iPSCas9KO-WB17902 11253  
RUES3-DB18144 11255  
WC005i-FX11-7-WB18030 11256  
WIC02i-02-05-WB18279 11257  
PACT-ESC-WA01-RB18519 11258  
PACT-ESC-WA01-RB18522 11259  
WIP07e-H9Cas9Het-WB18521 11260  
WIP06i-iPSCas9Het-WB18520 11261  
UWWC1-DS4-WB18225 11262  
UWWC1-2DS3-WB18532 11263  
WC-24-02-DS-C-WB18862 11264  
WC-24-02-DS-B-WB18712 11265  
WC-24-02-DS-M-WB18754 11266  
UWWC1-DS2U-WB19012 11267  
WIC07i-07982-4-WB18972 11268  
WC-24-02-DS-P-WB18907 11269  
WC-24-02-DS-A-WB18711 11270  
WC-24-02-DS-O-WB19180 11271  
WC-3801-5-WB16647 11272

PRODUCT LOT	NA	BI LOT	NA
STERILE LOT	NA	BI EXPIRATION DATE	NA
STERILIZATION LOT	NA	DATE RECEIVED	2015-05-06
STERILIZATION DATE	NA	TEST INITIATED	2015-05-07
STERILIZATION METHOD	NA	TEST COMPLETED	2015-05-21
SAMPLING BLDG / ROOM	NA		

REFERENCE Processed according to LAB-003: Sterility Test Procedure

Nineteen (19) 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

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.

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

A subsidiary of STERIS Corporation

BIOTEST SAMPLE # 15050336

RESULTS	# POSITIVES	# TESTED	POSITIVE CONTROL	NEGATIVE CONTROL
Non-Sterile	1	19	NA	2 Negatives

COMMENTS One (1) sample labeled as WC-24-02-DS-M-WB18754 11266 had growth in FTG.

REVIEWED BY

[Redacted Signature]

DATE

26 MAY 15

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.



# Mycoplasma Detection Assay Report

Testing Performed by WiCell

Lot Release Test

05-22-2015

FORM SOP-QU-004.01

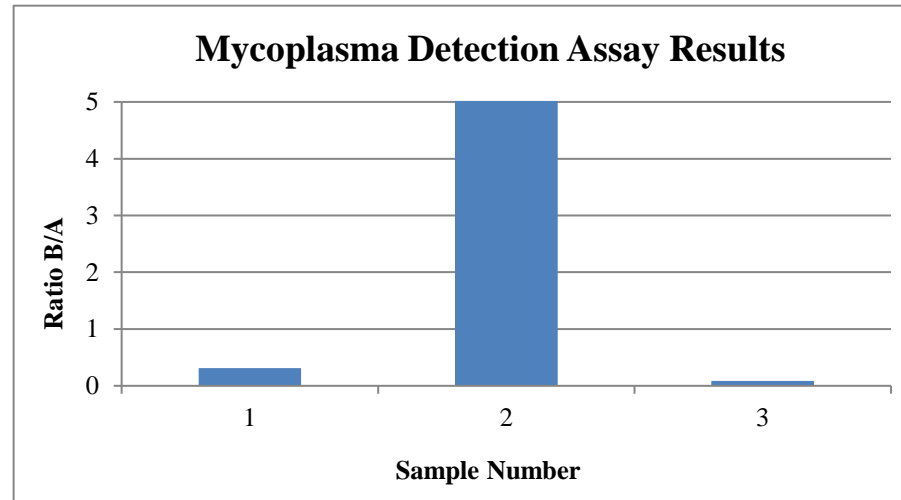
Version D Edition 01

Reported by: SS

Reviewed by: JB

Berthold Flash n' Glo 539

#	Sample Name	Reading A			Reading B			Ratio B/A	Result	Comments/Suggestions
		RLU1	RLU2	Ave	RLU1	RLU2	Ave			
1	RUES3-DB18144 11283	154	158	156	48	49	48.5	0.31	Negative	
2	Positive (+) Control	309	303	306	9453	9385	9419	30.78	Positive	
3	Negative (-) Control	544	541	542.5	48	46	47	0.09	Negative	





**Date Reported:** Wednesday, May 27, 2015

**Cell Line Gender:** Male

**Cell Line:** RUES3-DB18144 11283

**Reason for Testing:** Lot release testing

**Passage#:** 10

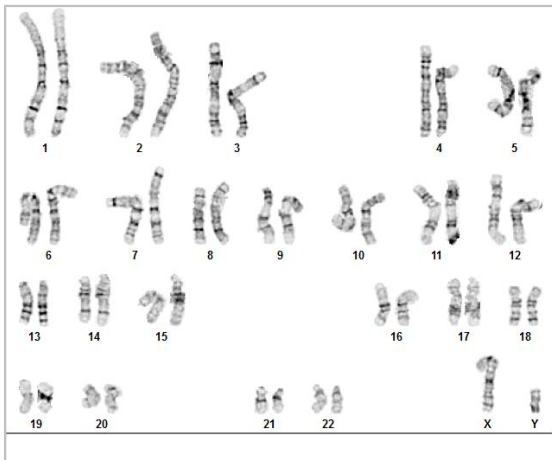
**Date of Sample:** 5/22/2015

**Investigator:** [REDACTED], WiCell CDM

**Specimen:** hESC

**Results:** 46,XY

**Nonclonal findings: 47,XY,+15**



**Cell:** 21

**Slide:** 1

**Slide Type:** Karyotype

**Total Counted:** 20

**Total Analyzed:** 8

**Total Karyotyped:** 4

**Band Resolution:** 550 - 600

**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. 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 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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