



Thaw and Culture Details

Cell Line Name	HVRDi001-A-1
WiCell Lot Number	WB66254
Parent Material	HVRDi001-A-1-DB46573
Provider	Brigham & Women's Hospital – Dr. Tracy Young-Pearse
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	p31 These cells were cultured for 30 passages after colony picking. WiCell adds +1 to the passage number to best represent the overall passage number of the cells at thaw.
Date Vialied	06-June-2017
Vial Label	HVRDi001-A-1 p31 WB66254
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	Pass
	<i>Result from report: This is an abnormal karyotype. There is an apparently balanced translocation between the long arms of chromosomes 1 and 12 in twenty of twenty cells examined. No other clonal abnormalities were found.</i>			
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 STR profile of deposited cell line	Pass
Sterility	Biotest Laboratories	ST/07	Negative	Pass
Mycoplasma	WiCell	SOP-QU-004	Negative	Pass



Testing Reported by Provider

The Provider stated that some or all of the additional analyses 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.

- Expression of MAP2, Tau and TuJ1, markers of upper (Cux1) and lower (Tbr1) layer cortical neurons and synaptic markers synaptophysin (SYP), PSD95 and VGLUT1 by immunostaining
- Embryoid body formation and in vitro differentiation to ectodermal, mesodermal, and endodermal lineage

Approval Date	Quality Assurance Approval
28-July-2017	<p style="text-align: right;">9/28/2021</p> <p>X HEB HEB Quality Assurance Signed by: Bruner, Haley</p>

Short Tandem Repeat Analysis

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

Sample Report:

12556-STR
Sample Name on Tube: 12556-STR
57.6 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: 07/03/17
Assay Date: 07/05/17
File Name: STR 170707 wmr
Report Date: 07/11/17

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 been redacted to protect donor confidentiality. If more information is required, please, contact WiCell's Technical Support .
TPOX	6-13	
D8S1179	7-18	
vWA	10-22	
Amelogenin	X,Y	
Penta_D	2.2, 3.2, 5, 7-17	
CSF1PO	6-15	
D16S539	5, 8-15	
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	

Results: Based on the 12556-STR cells submitted by WiCell QA dated and received on 07/03/17, this sample (Label on Tube: 12556-STR) defines the STR profile of the human stem cell line HVRDi001-A-1 comprising 28 allelic polymorphisms across the 15 STR loci analyzed.

Interpretation: No STR polymorphisms other than those corresponding to the human HVRDi001-A-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 12556-STR sample submitted corresponds to the HVRDi001-A-1 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 07/12/17

TRIP Laboratory, Molecular

X_{WMR}

Digitally Signed on 07/12/17

PhD, Director / Co-Director
UWHC Molecular Diagnostics Laboratory / UWSMPH TRIP Laboratory

Native Product Sterility Report



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

SAMPLE #: 17062122
DATE RECEIVED: 29-Jun-17
TEST INITIATED: 30-Jun-17
TEST COMPLETED: 14-Jul-17

SAMPLE NAME / DESCRIPTION: JHU024i-DB40969 12578
JHU044i-DB41057 12579
JHU045i-DB41060 12580
JHU204i-DB36815 12581
JHU222i-DB36892 12582
JHU236i-DB37047 12583
HVRDi001-A-1-WB66254 12584
HVRDi002-A-WB65326 12585
UCSD236i-APP1-1-WB66255 12587
UCSD237i-APP1-2-DB26822 12589

UNIQUE IDENTIFIER: NA
PRODUCT REGISTRATION: 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

Native Product Sterility Report



COMMENTS: Sample # 17062122

REVIEWED BY Dusad

DATE 17 JUL 17

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 15, 2017

FORM SOP-QU-004.01

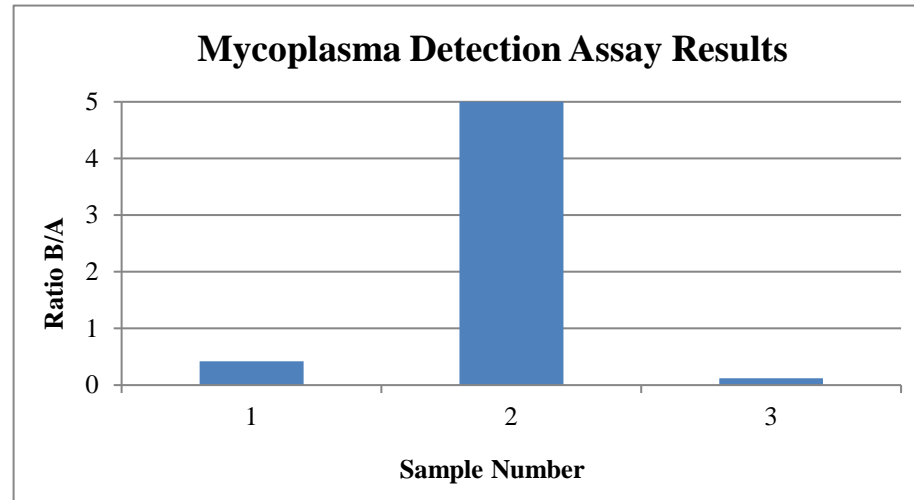
Version F Edition 02

Reported by: KR

Reviewed by: JB

BD Monolight 180

#	Sample Name	Reading A			Reading B			Ratio B/A	Result	Comments/Suggestions
		RLU1	RLU2	Ave	RLU1	RLU2	Ave			
1	HVRDi001-A-1-WB66254 12556	246	258	252	107	106	106.5	0.42	Negative	
2	Positive (+) Control	360	365	362.5	39997	40090	40044	110.46	Positive	
3	Negative (-) Control	605	615	610	76	69	72.5	0.12	Negative	



Date Reported: Friday, June 23, 2017

Cell Line: HVRDi001-A-1-WB66254 12556

Passage#: 31

Date of Sample: 6/16/2017

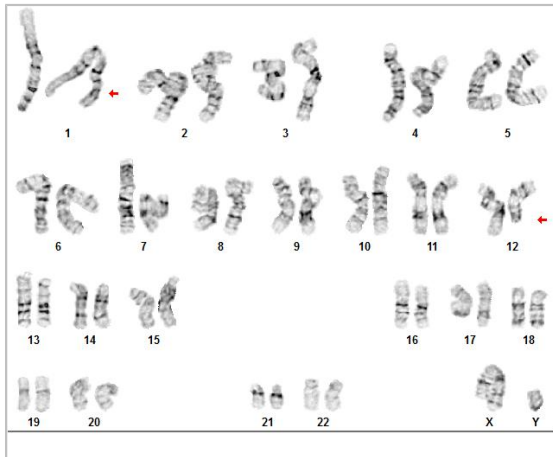
Specimen: Human IPS

Results: 46,XY,t(1;12)(q44;q22)[20]

Cell Line Gender: Male

Reason for Testing: lot release testing

Investigator: [REDACTED], WiCell CDM



Cell: 29

Slide: G02

Slide Type: Karyotype

Total Counted: 20

Total Analyzed: 8

Total Karyogrammed: 4

Band Resolution: 400 - 475

Interpretation:

This is an abnormal karyotype. There is an apparently balanced translocation between the long arms of chromosomes 1 and 12 in twenty of twenty cells examined. No other clonal abnormalities were found.

Comparison of this karyotype with the karyotype of the source specimen may be informative.

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.

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.