

Thaw and Culture Details

Cell Line Name	MCW035i-A3267			
WiCell Lot Number	WB67388			
Parent Material	MCW035i-A3267-DB66340			
Provider	Medical College of Wisconsin – Laboratory of Dr. Ulrich Broeckel			
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: TeSR [™] -E8 [™]			
	Matrix: Matrigel®			
Protocol	WiCell Feeder Independent E8 Medium Protocol			
Passage Number	p17 These cells were cultured for 16 passages prior to freeze and post colony selection. WiCell adds +1 to the passage number at freeze to best represent the overall passage number of the cells at thaw. Plated cells at thaw should be labeled passage 17.			
Date Vialed	14-January-2020			
Vial Label	MCW035i-A3267 p17 WB67388			
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
Post-Thaw Viable Cell Recovery	WiCell	SOP-CH-305	 ≥ 15 Undifferentiated Colonies prior to passage, ≤ 30% Differentiation prior to passage, 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	Steris	ST/07	Negative	Pass
Mycoplasma	WiCell	SOP-CH-044	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.

- Tra1-60 marker expression
- mRNA expression by qPCR
- Infinium[®] Expanded Multi-Ethnic Genotyping Array (MEGA^{EX})

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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.



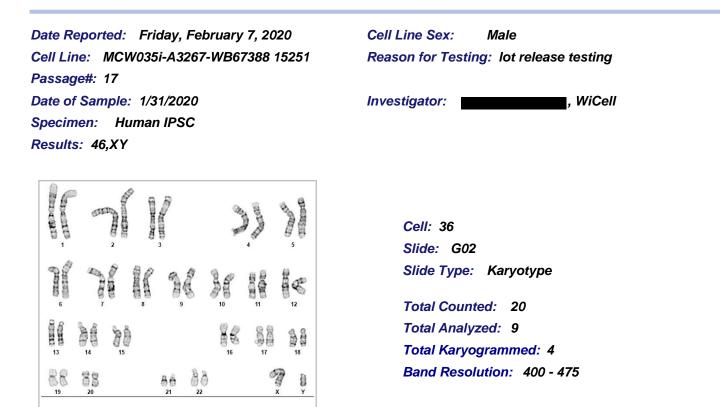
Approval Date	Quality Assurance Approval		
25-February-2020	2/25,78220 XG Quality Assurance Signed by Gay, Jenna		

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Chromosome Analysis Report: 080073



Interpretation:

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:		, Ph.D.	
Date:	Sent Bv:	Sent To:	QC Review Bv:

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.



Short Tandem Repeat Analysis



characterization@wicell.org

(608) 316-4145

Receive Date: 02/03/20 **Report Sent: 02/10/20** Assav Date: 02/04/20 File Name: STR 200207 wmr **Report Date: 02/07/20**

TRIP Laboratory (Molecular) https://research.pathology.wisc.edu/trip-home/ (608) 265-9168

Department of Pathology and Laboratory Medicine

Sample Report:

Requestor:

MCW035i-A3267-WB67388 15251 p.17 (80073) D01 WiCell Research Institute Sample Name on Tube: MCW035i-A3267-WB67388 15251 p.17 (80073) D01 **Characterization Department** 62.4 ng/µL, (A260/280=1.68) Sample Type: DNA Cell Count: N/A

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
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	

Results: Based on the MCW035i-A3267-WB67388 15251 p.17 (80073) D01 DNA submitted by WiCell Characterization Department dated and received on 02/03/20, this sample (Label on Tube: MCW035i-A3267-WB67388 15251 p.17 (80073) D01) defines the STR profile of the human cell line MCW035i-A3267 comprising 27 allelic polymorphisms across the 15 STR loci analyzed.

Interpretation: No STR polymorphisms other than those corresponding to the human MCW035i-A3267 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 MCW035i-A3267-WB67388 15251 p.17 (80073) D01 sample submitted corresponds to the MCW035i-A3267 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 cell lines is ~2-5%.

X RMB Digitally Signed on 02/10/20	X WMR Digitally Signed on 02/10/20
, BA TRIP Laboratory, Molecular	, PhD, Director / Co-Director UWHC Molecular Diagnostics Laboratory / UWSMPH TRIP Laboratory
festing was accomplished by analysis of human genetic polymorphisms at STR lo	ci. 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: https://research.pathology.wisc.edu/acknowledging-trip/ 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 https://www.wicell.org/media.acux/ca76d97c-862a-43f3-b02a-ab2d1e619100. 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.

Native Product Sterility Report



WiCell 504 S Rosa Road, Rm 10	1			SAMPLE #: DATE RECEIVED: TEST INITIATED:	20011487 23-Jan-20 29-Jan-20
Madison, WI 53719			TE:	ST COMPLETED:	12-Feb-20
SAMPLE NAME / DES	SCRIPTION:	WC064i-247-1-2-22 PENN022i-89-1 UCSD128i-7-5	5 WB67382 152 WB67383 1523 8 WB67386 152	36 7 38 39	
UNIQUE IDENTIFIER:		NA			
TEST RESULTS:	# Tested	# Positives (Growth)	- Control		

TEST SUMMARY:	# Samples	Media Type	Volume (mL)	Incubation Temperature (° C)	Incubation Duration (Days)
	10	TSB	40	20-25	14
er I	10	FTG	40	30-35	14
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REFERENCE: PD #:

TEST METHODOLOGY:

10

Processed according to LAB-003: Sterility Test Procedure 000053 **USP** - Direct Transfer

2 Negatives

COMMENTS:

NA **REVIEWED BY**

0

DATE 14FEB2020

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. Results applied to samples as received.



Mycoplasma Assay Report

PCR-based assay performed by WiCell WiCell 29Jan20

Sample Name	Result	Comments/Suggestions
MCW026i-50000685-WB67283 15256	Negative	
(79973)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
UCSD128i-7-5-WB67390 15263 (79974)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
MCW055i-U2054-DB66384 15246	Negative	
(79976)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
MCW030i-A2688-WB67307 15257	Negative	
(79977)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
MCW007i-U2456-WB67198 15252	Negative	
(79978)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
WC064i-247-1-2-22-WB67389 15259	Negative	
(79979)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
MCW013i-A2767-WB67191 15253	Negative	
(79980)	Regative	Band was not seen at 270bp, indicating the absence of mycoplasma.
MCW035i-A3267-WB67388 15251	Negative	
(79981)	Regative	Band was not seen at 270bp, indicating the absence of mycoplasma.
MCW020i-A2023-WB67311 15258	Negative	
(79982)	Negative	Band was not seen at 270bp, indicating the absence of mycoplasma.
MCW054i-U2073-DB66383 15247	Negative	
(79989)	inegative	Band was not seen at 270bp, indicating the absence of mycoplasma.
Positive (+) Control	Positive	
Negative (-) Control	Negative	

Reported by: Molly Miles, Cell Culture Specialist Reviewed by: Katie Remondini, Cell Culture Specialist

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A gel image is available upon request.