

Thaw and Culture Details

| Cell Line Name | Al08e-PAX6YFP | | |
|--|---|--|--|
| WiCell Lot Number | WB67216 | | |
| Parent Material | AI08e-PAX6YFP-DB66693 | | |
| Provider | Allen Institute – Dr. Boaz Levi | | |
| 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 | p69 These cells were cultured for 68 passages prior to freeze. Cells were modified at passage 38. 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 69. | | |
| Date Vialed | 07-June-2019 | | |
| Vial Label AI08e-PAX6YFP p69 WB67216 | | | |
| 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, ≤ 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-CH-044 | Negative | Pass |

| Approval Date | Quality Assurance Approval | | |
|---------------|--|--|--|
| 18-July-2019 | 7/18,0019 XIG Quality Assurance Signed by: Gay, Jenna | | |

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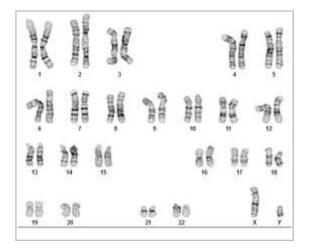
The material provided under this certificate has been subjected to the tests specified and the results and data described herein are accurate based on WiCell's reasonable knowledge and belief. Appropriate Biosafety Level practices and universal precautions should always be used with this material. For clarity, the foregoing is governed solely by WiCell's Terms and Conditions of Service, which can be found at http://www.wicell.org/privacyandterms.



Date Reported: Tuesday, July 2, 2019 Cell Line: Al08e-PAX6YFP-WB67216 14814 Passage#: 69 Date of Sample: 6/25/2019 Specimen: Human ES Results: 46,XY Cell Line Sex: Male Reason for Testing: lot release testing

Investigator:

, WiCell



| Cell: 16 |
|----------------------------|
| Slide: G02 |
| Slide Type: Karyotype |
| Total Counted: 20 |
| Total Analyzed: 8 |
| Total Karyogrammed: 4 |
| Band Resolution: 425 - 525 |

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:
 ________, PhD, FACMG

 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 or effect.

TRIPath

HISTOLOGY - IHC - MOLECULAR - IMAGING

Department of Pathology and Laboratory Medicine TRIP Laboratory (Molecular) https://research.pathology.wisc.edu/trip-home/ (608) 265-9168

Sample Report:

14814-STR Sample Name on Tube: 14814-STR 31.0 ng/ μ L, (A260/280=2.11) Sample Type: Cells Cell Count: ~2 million cells

Short Tandem Repeat Analysis

Requestor: WiCell Research Institute Quality Assurance Department



characterization@wicell.org (608) 316-4145

Receive Date: 07/01/19 Report Sent: 07/06/19 Assay Date: 07/01/19 File Name: STR 190702 wmr Report Date: 07/05/19

| 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 |
| TPOX | 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, |
| CSF1PO | 6-15 | please, contact |
| D16S539 | 5, 8-15 | WiCell's Technical Support. |
| D7S820 | 6-14 | <u>Support.</u> |
| 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 14814-STR cells submitted by WiCell QA dated and received on 07/01/19, this sample (Label on Tube: 14814-STR) exactly matches the STR profile of the human cell line AI08e-PAX6YFP comprising 28 allelic polymorphisms across the 15 STR loci analyzed.

<u>Interpretation:</u> No STR polymorphisms other than those corresponding to the human AI08e-PAX6YFP 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 14814-STR sample submitted corresponds to the AI08e-PAX6YFP cell line and was not contaminated with any other human 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 cell lines is ~2-5%.

| X RMB Digitally Signed on 07/05/19 | X WMR Digitally Signed on 07/05/19 |
|------------------------------------|--|
| BA | , PhD, Director / Co-Director |
| TRIP Laboratory, Molecular | 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: 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 101 Madison, WI 53719 | | SAMPLE #:1906180DATE RECEIVED:20-Jun-1TEST INITIATED:25-Jun-2TEST COMPLETED:09-Jul-1 | 19 19 |
|--|----|--|----------|
| SAMPLE NAME / DESCRIPTION: | | DB44252 14847 | |
| | NA | | |

UNIQUE IDENTIFIER:

NA

| TEST RESULTS: | # Tested | # Positives (Growth) | - Control | |
|---------------|----------|-------------------------|------------|---------------------------------------|
| | 19 | 0 | 2 Negative | |
| TEST SUMMARY: | | | | · · · · · · · · · · · · · · · · · · · |

| TEST SUMMARY: | # Samples | Media Type | Volume (mL) | Incubation Temperature (° C) | Incubation Duration (Days) |
|-----------------|-----------|-------------------|---------------------|------------------------------------|----------------------------------|
| | 19 | TSB | 40 | 20-25 | 14 |
| | 19 | FTG | 40 | 30-35 | 14 |
| REFERENCE: | | Processed accord | ding to LAB-003: St | terility Test Procedu | Ire |
| PD #: | | 000053 | | | |
| TEST METHODOLOG | θY: | USP - Direct Trar | nsfer | | |





COMMENTS: Sample #19061805

Reported as per packing slip.

REVIEWED BY

DATE 10 TUL 19

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.

K



Mycoplasma Assay Report

PCR-based assay performed by WiCell Lot Release Testing 26Jun19

| # | Sample Name | Result | Comments/Suggestions |
|---|-----------------------------|----------|--|
| 1 | AI08e-PAX6YFP-WB67216 14814 | Negative | Band was not seen at 270bp, indicating the absence of mycoplasma |
| 2 | Positive (+) Control | Positive | |
| 3 | Negative (-) Control | Negative | |

Reported by: Katie Remondini, Cell Culture Specialist Reviewed by: Alex Paguirigan, Assistant Cell Culture Specialist

Date:_____ Sent By:____ Sent To_

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A gel image is available upon request.