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Case Number: AS1778

STR Analysis for Cell Line Authentication

| Institute | Researcher Name | Cell Line ID | Date Received | Date Analyzed |
|-----------|-----------------|--------------|---------------|---------------|
| Biologica | N/A | AS1778 | 6/23/2015 | 6/25/2015 |

Results:

| Genetic Locus | AS1778ID1 2015.6.17 | | | | |
|---------------|----------------------------------|--|--|--|--|
| D8S1179 | 14,15 | | | | |
| D21S11 | 31,32.2 | | | | |
| D7S820 | 7,10 12,12 16,17 | | | | |
| CSF1PO | | | | | |
| D3S1358 | | | | | |
| TH01 | 10,10 10,10 11,11 17,17 | | | | |
| D13S317 | | | | | |
| D16S539 | | | | | |
| D2S1338 | | | | | |
| D19S433 | 13.2,16 | | | | |
| vWA | 17,18 | | | | |
| TPOX | 8,9 | | | | |
| D18S51 | 15,17 X,X | | | | |
| AMEL | | | | | |
| D5S818 | 11,12 | | | | |
| FGA | 20,20 | | | | |
| | Table 1 | | | | |

Conclusion:

The DNA profile obtained from item AS1778ID1 2015.6.17 is compiled in Table 1.

This item yielded a full DNA profile, and the AMEL locus amplified from the X chromosome. Therefore it can be concluded that the DNA of this cell line most likely originated from a female individual. Contamination by another human cell line was not detected.

BIO-SYNTHESIS, INCORPORATED and the DNA IDENTITY TESTING LABORATORY expressly disclaim any and all responsibility for the validity of this report. The collection of samples from the named cell lines was not witnessed, nor identities verified in compliance with established chain of custody guidelines. Therefore, the results of this test should not be considered legally valid and no warranty.

Deoxyribonucleic acid (DNA) was extracted and genetic loci were amplified from samples provided to the DNA Identity Testing Laboratory of Bio-synthesis, Inc. the conclusion has been verified as true and correct relative to the DNA profiles presented herein and the biographical data provided by the customer.

Director

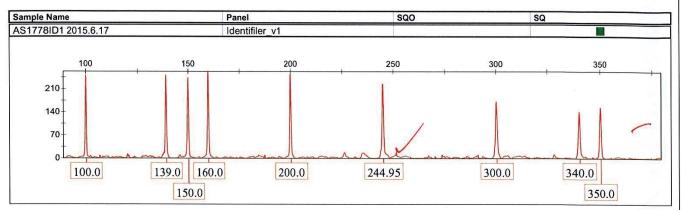
06/25/15

Sworn and Subscribed before me this

Notary Public, State of Texas

HEIDI FAZELI Notary Public, State of Texas My Commission Expires October 21, 2018

SUP708



| | Sample Name | Marker | Allele 1 | Allele 2 | Allele 3 | Allele 4 | Allele 5 |
|----|------------------------|---------|-------------|----------|----------|----------|----------|
| 1 | AS1778ID1 2015.6.17 | D8S1179 | 14 | 15 | | | |
| 2 | AS1778ID1 2015.6.17 | D21S11 | 31 | 32.2 | | | |
| 3 | AS1778ID1 2015.6.17 | D7S820 | 7 | 10 | | | |
| 4 | AS1778ID1 2015.6.17 | CSF1PO | 12 | | | | |
| 5 | AS1778ID1 2015.6.17 | D3S1358 | 16 | 17 | | | |
| 6 | AS1778ID1 2015.6.17 | TH01 | 10 | | | | |
| 7 | AS1778ID1 2015.6.17 | D13S317 | 10 | | | | |
| 8 | AS1778ID1 2015.6.17 | D16S539 | 11 | | | | |
| 9 | AS1778ID1 2015.6.17 | D2S1338 | 17 | | | | |
| 10 | AS1778ID1 2015.6.17 | D19S433 | 13.2 | 16 | | | |
| 11 | AS1778ID1 2015.6.17 | vWA | 17 | 18 | | | |
| 12 | AS1778ID1 2015.6.17 | TPOX | 8 | 9 | | | |
| 13 | AS1778ID1 2015.6.17 | D18S51 | 15 | 17 | | | |
| 14 | AS1778ID1 2015.6.17 | D5S818 | 11 | 12 | | | |
| 15 | AS1778ID1 2015.6.17 | AMEL | X | | Jenne | | |
| 16 | AS1778ID1 2015.6.17 | FGA | 20 | | | | |
| | | | | | | no | 6/25/15 |
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