Report of Human Cell Line Authentication

I. Sample

Sample Name: labeled as ‘Hep G2’

II. Method and Procedure

1. PCR is amplified with STR Multi-amplification Kit (PowerPlex™ 21D System);

2. PCR products are assayed with 3100 DNA Analyzer (Applied Biosystems®).

3. Amplification of gene COX1 and electrophoresis are employed to survey the species of the sample.

III. Results

1. The STR profiles of the cell line sample are in the attached table and figure.

2. The search result in ATCC and DSMZ databases.

3. The electrophoresis figure of gene COX1.

Hep G2: ①No loci has tri-alleles or tetra-alleles. Contamination of other human cell lines are not found (Figure 1 & Table 1). ②Compared the STR data of HEPG2 cell line in the databases of ATCC and DSMZ, all the alleles of HEPG2 were exactly matched with the alleles of HEPG2 cells found in both cell banks (Figure 2 & 3). ③The sample is a human cell line. Contamination of other species cells are not found in the sample (Figure 4).

To all above, the sample is a single cell line, and it is HEPG2 cell line.

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（Notice: This authentication report is restricted to the cell sold from Guangzhou Cellcook Biotech Co., Ltd, and the date with seal is the date of delivery.）
Table 1. STR profiles of Hep G2 cell line

|     | Allele1 | Allele2 |
|-----|---------|---------|
| AMEL | X       | Y       |
| D3S1358 | 15     | 16      |
| D1S1656 | 11     | 12      |
| D6S1043 | 13     |         |
| D13S317 | 9      | 13      |
| Penta E | 15     | 20      |
| D16S539 | 12     | 13      |
| D18S51  | 13     | 14      |
| D2S1338 | 19     | 20      |
| CSF1PO | 10     | 11      |
| Penta D | 9      | 13      |
| TH01   | 9       |         |
| vWA    | 17      |         |
| D21S11 | 29     | 31      |
| D7S820 | 10      |         |
| D5S818 | 11     | 12      |
| TPOX   | 8       | 9       |
| D8S1179| 15     | 16      |
| D12S391| 21     | 25      |
| D19S433| 15, 2  |         |
| FGA    | 22     | 25      |

Figure 2. Search result in ATCC database

SEARCH THE STR DATABASE

As part of our continuing efforts to characterize and authenticate the cell lines in the Cell Biology collection, ATCC has developed a comprehensive database of short tandem repeat (STR) DNA profiles for all of our human cell lines. View our brief tutorial before starting.

1. STR Profiling Analysis
2. Matching Algorithm
3. Interrogating the Database

Showing 1 - 4 Of 4
M: Marker. As the size of 700, 600, 500, 400, 300, 200 and 100bp from up to down.

Nine species are checked, as follow: *Homo sapiens* 391bp, *Cricetulus griseus* 315bp, *Macaca mulatta* 287bp, *Cercopithecus aethiops* 222bp, *Rattus norvegicus* 196bp, *Canis familiaris* 172bp, *Mus musculus* 150bp, *Bos Taurus* 102bp, IC 70bp

The sample: The band size is 391bp which matches the size of human.