Report of Human Cell Line Authentication

Ⅰ. Sample

Sample Name: labeled as 'Hela'

Ⅱ. Method and Procedure

1. PCR is amplified with STR Multi-amplification Kit (PowerPlex 21 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.

Hela: ①1 loci has tri-alleles. Contamination of other human cell lines are not found (Figure 1 & Table 1). ②Compared the STR data of Hela cell line in the databases of ATCC and DSMZ, the alleles of Hela were 94% matched with the alleles of Hela 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 derived from a common ancestry with Hela cell line.

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Guangzhou Cellcook Biotech Co., Ltd

GUANGZHOU CELLCOOK BIOTECH CO.,LTD 21 AUG 2020 CELL STR PROFILING

（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.）

Figure 1. STR profiles of Hela cell line

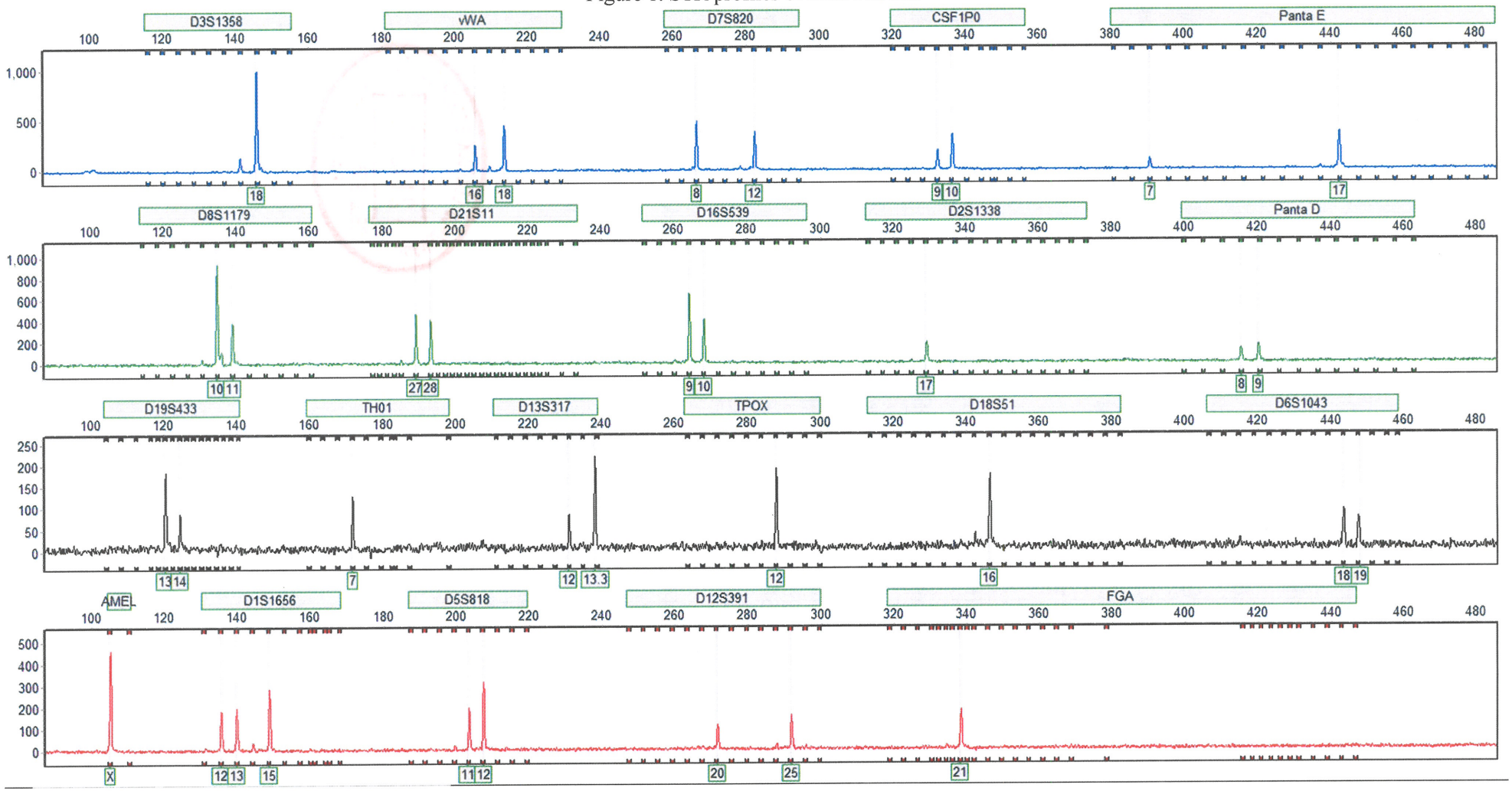

Table 1. STR profiles of Hela cell line

21	Allele1	Allele2	Allele3
D3S1358	18		
vWA	16	18	
D7S820	8	12	
CSF1PO	9	10	
Penta E	7	17	
D8S1179	10	11	
D21S11	27	28	
D16S539	9	10	
D2S1338	17		
Penta D	8	9	
D19S433	13	14	
TH01	7		
D13S317	12	13.3	
TPOX	12		
D18S51	16		
D6S1043	18	19	
AMEL	X		
D1S1656	12	13	15
D5S818	11	12	
D12S391	20	25	
FGA	21		

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

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Add to Cart	%Match	ATCC® Number	Designation	D5S818	D13S317	D7S820	D16S539	vWA	TH01	AMEL	TPOX	CSF1PO
	94.0	CCL-2	HeLaCervical AdenocarcinomaHuman	11,12	12,13.3	8,12	9,10	16,18	7	X	8,12	9,10
	94.0	CCL-5	L132Cervical carcinomaHuman	11,12	12,13.3	8,12	9,10	16,18	7	X	8,12	9,10

Figure 3. Search result in DSMZ database

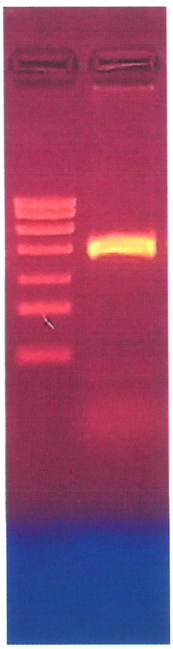
Result of STR matching analysis by your data.

- DSMZ Profile Database -

A graphical presentation is shown at the bottom of this page.

EV	Cell No.	Cell name	Locus names									Figures
			D5S818	D13S317	D7S820	D16S539	VWA	TH01	AM	TPOX	CSF1PO	
	Query (Your Cell)		*11,12*	*12,13.3*	*8,12*	*9,10*	*16,18*	*7,7*	*x,x*	*12,12*	*9,10*	
1.00(36/36)	JCRB0649.1	HeLa.P3	11,12	12,13.3	8,12	9,10	16,18	7,7	X,X	12,12	9,10	-
0.94(34/36)	57	HELA	11,12	12,13.3	8,12	9,10	16,18	7,7	X,X	8,12	9,10	-
0.94(34/36)	57	HELA	11,12	12,13.3	8,12	9,10	16,18	7,7	X,X	8,12	9,10	-
0.94(34/36)	116	GIRARDI HEART C2	11,12	12,13.3	8,12	9,10	16,18	7,7	X,X	8,12	9,10	-
0.94(34/36)	121	GIRARDI HEART C7	11,12	12,13.3	8,12	9,10	16,18	7,7	X,X	8,12	9,10	-
0.94(34/36)	136	KB	11,12	12,13.3	8,12	9,10	16,18	7,7	X,X	8,12	9,10	-
0.94(34/36)	149	KB-V1	11,12	12,13.3	8,12	9,10	16,18	7,7	X,X	8,12	9,10	-
0.94(34/36)	158	KB-3-1	11,12	12,13.3	8,12	9,10	16,18	7,7	X,X	8,12	9,10	-
0.94(34/36)	161	HELA-S3	11,12	12,13.3	8,12	9,10	16,18	7,7	X,X	8,12	9,10	-
0.94(34/36)	CCL-17	KB	11,12	12,13.3	8,12	9,10	16,18	7,7	X,X	8,12	9,10	-
0.94(34/36)	CCL-2	HeLa	11,12	12,13.3	8,12	9,10	16,18	7,7	X,X	8,12	9,10	-

Figure 4. Authentication of the species of the sample



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.