

Cell Line Authentication Service

STR Profiling Report

Sample From: Guangdong Provincial
People's Hospital

Sample Type: Cell Line

Testing Method: STR Genotyping

Report Time: 12/24/2021

COMPANY STATEMENT

1. THIS REPORT IS ONLY RESPONSIBLE FOR THE SAMPLES ANALYZED.
2. THE TESTING RESULTS AND THE ORGANIZATION NAME WILL NOT BE USED FOR ADVERTISEMENT, COMMERCIAL EXHIBITIONS, COMMERCIAL PERFORMANCE AND OTHER COMMERCIAL ACTIVITIES.
3. OBJECTIONS SHOULD BE RAISED WITHIN FIFTEEN DAYS AFTER THE RECEIPT OF THIS REPORT.
4. THE PAPER REPORT WITH CONTENT ALTERING, ADDING OR WITHOUT THE STAMPED SEAL OF THE COMPANY ARE INVALID.

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Cell Line Authentication – STR Profiling Report

Sample code

Table 1. Sample Code

Customer's code	Company Code
HEK293T	20211224-01

Sample Number: 1

Sample Type: Cell line

Testing Type: STR

Testing Method:

DNA was extracted by a commercial kit from CORNING (AP-EMN-BL-GDNA-250G). The twenty STRs including Amelogenin locus were amplified by six multiplex PCR and separated on ABI 3730XL Genetic Analyzer. The signals were then analyzed by the software GeneMapper.

Data Interpretation:

Cell lines were authenticated using Short Tandem Repeat (STR) analysis as described in 2012 in ANSI Standard (ASN-0002) by the ATCC Standards Development Organization (SDO) and in Capes-Davis et al., Match criteria for human cell line authentication: Where do we draw the line? Int J Cancer.2013;132(11):2510-9.

Test Results

1. STR profile

Table 2. STR and Amelogenin Genotyping Results of Cell line.

Loci	Sample information			Cell Bank information		
	Sample name: HEK293T			Cell line name: HEK293T		
	Allele1	Allele2	Allele3	Allele1	Allele2	Allele3
D5S818	8	9		8	9	
D13S317	12	12		12	12	
D7S820	11	11		11	11	
D16S539	9	13		9	13	
VWA	16	19		16	19	
TH01	7	9.3		7	9.3	
AMEL	X	X		X	X	
TPOX	11	11		11	11	
CSF1PO	11	12		11	12	
FGA	23	23				
Penta E	7	15				
Penta D	9	10				
D21S11	28	30.2				
D18S51	17	18				
D8S1179	12	14				
D3S1358	15	16	17			
D19S433	18	18				
D2S1338	19	19				

2. database annotation

Figure 1. STR matching analysis

Cell line name	HEK293T																																				
Synonyms	Hek293T, HEK-293T, HEK 293T, HEK-293-T, HEK 293 T, 293-T, 293 T, 293T, Human Embryonic Kidney 293T, 293tsA1609neo																																				
Accession	CVCL_0063																																				
Resource Identification Initiative	To cite this cell line use: HEK293T (RRID:CVCL_0063)																																				
Comments	Part of: ENCODE project common cell types; tier 3. Part of: MD Anderson Cell Lines Project. Doubling time: ~24-30 hours (DSMZ). Transfected with: UniProtKB; P00552; Transposon Tn5 neo. Transformant: NCBI_TaxID: 28285; Adenovirus 5. Transformant: NCBI_TaxID: 1891767; Simian virus 40 (SV40) [tsA]. Omics: Deep proteome analysis. Omics: Genome sequenced. Omics: miRNA expression profiling. Omics: Protein expression by reverse-phase protein arrays. Misspelling: HEK293T; Occasionally. Misspelling: HEK239T; Occasionally.																																				
Species of origin	Homo sapiens (Human) (NCBI Taxonomy: 9606)																																				
Sex of cell	Female																																				
Age at sampling	Fetus																																				
Category	Transformed cell line																																				
STR profile	<p>Source(s): ATCC; CCRID; DSMZ; ECACC; RCB</p> <p>Markers:</p> <table border="1"> <tr><td>Amelogenin</td><td>X</td></tr> <tr><td>CSF1PO</td><td>11,12</td></tr> <tr><td>D2S1338</td><td>19</td></tr> <tr><td>D3S1358</td><td>15,16,17</td></tr> <tr><td>D5S818</td><td>8,9</td></tr> <tr><td>D7S820</td><td>11</td></tr> <tr><td>D8S1179</td><td>12,14</td></tr> <tr><td>D13S317</td><td>12 (ECACC) 12,14 (ATCC; CCRID; DSMZ; RCB)</td></tr> <tr><td>D16S539</td><td>9,13</td></tr> <tr><td>D18S51</td><td>17,18</td></tr> <tr><td>D19S433</td><td>18</td></tr> <tr><td>D21S11</td><td>28,30,2</td></tr> <tr><td>FGA</td><td>23</td></tr> <tr><td>Penta D</td><td>9,10</td></tr> <tr><td>Penta E</td><td>7,15</td></tr> <tr><td>TH01</td><td>7,9,3</td></tr> <tr><td>TPOX</td><td>11</td></tr> <tr><td>VWA</td><td>16,19</td></tr> </table> <p>Run an STR similarity search on this cell line</p>	Amelogenin	X	CSF1PO	11,12	D2S1338	19	D3S1358	15,16,17	D5S818	8,9	D7S820	11	D8S1179	12,14	D13S317	12 (ECACC) 12,14 (ATCC; CCRID; DSMZ; RCB)	D16S539	9,13	D18S51	17,18	D19S433	18	D21S11	28,30,2	FGA	23	Penta D	9,10	Penta E	7,15	TH01	7,9,3	TPOX	11	VWA	16,19
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Note: The STR online match analysis of the test cell against EXPASY database, showing cell number (Cell No.) and cell name.

3. Authentication

The submitted sample profile is human, but not a match for any profile in the DSMZ STR database.

The submitted profile is an exact match for the following human cell line(s) in the EXPASY STR database (8 core loci plus Amelogenin) **HEK293T**.

The submitted profile is similar to the following DSMZ human cell line: /.

- **Note:** A cell line can be considered to be authenticated when 80% (exact match) of the alleles in its STR profile match profiles from tissue or other cell line samples from that donor or from database. Cell lines with between a 55% to 80% (similar) match require further profiling for investigation of relatedness.

Appendix:

1. Genotyping Strategy and Site Distribution

Table S1. Experimental Strategy and Sites

	Strategy 1	Strategy 2	Strategy 3	Strategy 4
1	D3S1358	D8S1179	D19S433	AMEL
2	VWA	D21S11	TH01	D1S1656
3	D7S820	D16S539	D13S317	D5S818
4	CSF1PO	D2S1338	TPOX	D12S391
5	PENTAE	PENTAD	D18S51	FGA
6	D6S1043			

The allele match algorithm compares the 8 core loci plus amelogenin only, even though alleles from all loci will be reported when available.

2. DSMZ tools was used to carry on the cell line comparison, which contains 2455 cell lines STR data from ATCC, DSMZ, JCRB ,ECACC, GNE and RIKEN databases. If the cell is not included in the above cell library, users need to compared with other databases.

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