

# Cell Line Authentication Service

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## STR Profiling Report

**Sample From:** the First Affiliated Hospital of  
Zhengzhou University

**Sample Type:** Cell Line

**Testing Method:** STR Genotyping

**Report Time:** 3/30/2020

## 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
CUTC5	20200324-05

**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: CUTC5			Cell line name: CUTC5		
	Allele1	Allele2	Allele3	Allele1	Allele2	Allele3
D5S818	11	12		11	12	
D13S317	12	14		12	14	
D7S820	10	10		10	10	
D16S539	9	12		9	12	
VWA	17	17		17	17	
TH01	6	8		6	8	
AMEL	X	X		X	X	
TPOX	9	11		9	11	
CSF1PO	11	12		11	12	
FGA	22.2	26				
D21S11	27	31.2				
D18S51	12	13				
D8S1179	12	13				
D3S1358	14	18				

## 2. database annotation

Figure 1. STR matching analysis

Cell line name	CUTC5																												
Synonyms	PE030810																												
Accession	CVCL_W916																												
Resource Identification Initiative	To cite this cell line use: CUTC5 (RRID:CVCL_W916)																												
Comments	Doubling time: 29 hours (PubMed=30733375). Omics: Transcriptome analysis.																												
Sequence variations	Heterozygous for ARID1A p.Glu1108Ter (PubMed=30737244). Heterozygous for BRAF p.Val600Glu (c.1799T>A) (PubMed=23833040; PubMed=30733375; PubMed=30737244). Heterozygous for IDH1 p.Arg132Leu (c.395G>T) (PubMed=30737244). Homozygous for TP53 p.Cys135Trp (c.405C>G) (PubMed=30733375; PubMed=30737244).																												
Disease	Thyroid gland papillary carcinoma (NCIt: C4035) Differentiated thyroid carcinoma (ORDO: Orphanet_146) Derived from metastatic site: Pleural effusion.																												
Species of origin	Homo sapiens (Human) (NCBI Taxonomy: 9606)																												
Sex of cell	Female																												
Age at sampling	73Y																												
Category	Cancer cell line																												
STR profile	<p>Source(s): PubMed=30733375; PubMed=30737244</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>D3S1358</td><td>14,18</td></tr> <tr><td>D5S818</td><td>11,12</td></tr> <tr><td>D7S820</td><td>10</td></tr> <tr><td>D8S1179</td><td>12,13</td></tr> <tr><td>D13S317</td><td>12,14</td></tr> <tr><td>D16S539</td><td>9,12</td></tr> <tr><td>D18S51</td><td>12,13</td></tr> <tr><td>D21S11</td><td>27,31.2</td></tr> <tr><td>FGA</td><td>22.2,26</td></tr> <tr><td>TH01</td><td>6,8</td></tr> <tr><td>TPOX</td><td>9,11</td></tr> <tr><td>VWA</td><td>17</td></tr> </table>	Amelogenin	X	CSF1PO	11,12	D3S1358	14,18	D5S818	11,12	D7S820	10	D8S1179	12,13	D13S317	12,14	D16S539	9,12	D18S51	12,13	D21S11	27,31.2	FGA	22.2,26	TH01	6,8	TPOX	9,11	VWA	17
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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): **CUTC5**.
- 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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**Issued by:** Yang Bai

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