Cell Line Authentication Service

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

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Testing Company: Shanghai Chenying Biotechnology Co. Ltd

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Sample code

Table 1. Sample Code

Customer's code	Company Code
TPC-1	20200324-02

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 asdescribed 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.

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Test Results

1. STR profile

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

Loci	Sample information			Cell Bank information		
	Sample name: TPC-1			Cell line name: TPC-1		
	Allele1	**Allele2**	**Allele3**	**Allele1**	**Allele2**	**Allele3**
CSF1PO	11	12		11	12	
D3S1358	16	17		16	17	
D5S818	8	10		8	10	
D7S820	11	11		11	11	
D8S1179	11	17		11	17	
D13S317	11	12		11	12	
D16S539	9	9		9	9	
D18S51	13	16		13	16	
AMEL	X	X		X	X	
FGA	20	21				
TH01	9	9				
TPOX	11	11				
vWA	14	18				
D21S11	30	31.2				

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2. database annotation

Figure 1. STR matching analysis

Cell line name	TPC-1
Synonyms	TPC1
Accession	CVCL_6298
Resource Identification Initiative	To cite this cell line use: TPC-1 (RRID:CVCL_6298)
Comments	Omics: Mitochondrial genome sequenced. Omics: Transcriptome analysis.
Sequence variations	CCDC6-RET (RET/PTC1) gene fusion (PubMed=30737244). Homozygous for CDKN2A p.Ala68fs (c.204_208delGGAGC) (PubMed=30737244). Heterozygous for STAG2 p.Gln1089Ter (c.3265C>T) (PubMed=30737244). Heterozygous for TERT c.228C>T (-124C>T); in promoter (PubMed=23833040; PubMed=30737244).
Disease	Thyroid gland papillary carcinoma (NCIt: C4035) Differentiated thyroid carcinoma (ORDO: Orphanet_146)
Species of origin	Homo sapiens (Human) (NCBI Taxonomy: 9606)
Hierarchy	Children: CVCL_6278 (BHP 10-3) | CVCL_6283 (BHP 2-7) | CVCL_6285 (BHP 7-13) CVCL_9917 (FB-2) | CVCL_V277 (RPTC-1)
Sex of cell	Female
Age at sampling	Adult
Category	Cancer cell line
STR profile	**Source(s):** PubMed=18713817; PubMed=21868764; PubMed=30737244 **Markers:**

Amelogenin	X
CSF1PO	11,12
D3S1358	16,17
D5S818	8,10
D7S820	11
D8S1179	11,17
D13S317	11,12
D16S539	9
D18S51	13,16
D21S11	30,31.2
FGA	20,21
TH01	9
TPOX	11
vWA	14,18

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): **TPC-1** .

☐ 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.

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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 lociwill 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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