

I CS 07.080

C 04

SZDB/Z

SZDB/Z 238—2017

Techni cal Speci fi cati on for Authenti cati on of Human Cel l Li nes
by Short Tandem Repeats Genotypi ng Method

2017-04-01

2017-05-01

1	.....	1
2	.....	1
3	.....	1
4	.....	2
5	.....	2
6	.....	3
7	.....	3
8	.....	5
9	.....	5
10	.....	5
A	STR	6
B	STR	7
C	STR	8
		9

GB/T 1.1-2009

STR

2015

/

National

Institute of Standards and Technology NIST STR
Authentication of Human Cell Lines: Standardization of STR Profiling ANSI/ATCC
ASN-0002-2011 STR

“ ” STR 9

STR STR

STR STR

1

STR

2

GB/T 1.1-2009 1
GB 19489-2008
GB/T 22278-2008
GB/T 27025-2008
SZDB/Z 124-2015 HLA
ANSI/ATCC ASN-0002-2011 Authentication of Human Cell Lines: Standardization of STR Profiling

3

3. 1

Cell Line

3. 2

Short Tandem Repeats

2 5 5~50

3. 3

Cross-contamination

3. 4

Genotyping

DNA

DNA

DNA

3.5

DNA Ladder

n

DNA

DNA

DNA Ladder

DNA

DNA

4

ATCC

American Type Culture Collection

DNA

Deoxyribonucleic Acid

DSMZ

Deutsche Sammlung von Mikroorganismen und

Zellkulturen

JCRB

JCRB

Japanese Collection of Research Bioreources Cell Bank

NIST

National Institute of Standards and Technology

OD

Optical Density

PBS

Phosphate Buffer Solution

PCR

Polymerase Chain Reaction

STR

Short Tandem Repeats

5

5.1

5.1.1

a)

PBS

PBS

b)

c)

d)

PBS

e)

5.1.2

a)

b)

c)

PBS

5.1.3

1×10^6

5.1.4

1 nL

PBS

2 nL

5. 2	DNA				
5. 2 1	DNA	DNA	20 μ L	50 ng/μ L	A260/A280
		1. 8~2.0			
5. 2 2	DNA	DNA	DNA	1. 5 nL	
			DNA		SDS
5. 3					
5. 3. 1					
5. 3. 2	DNA	DNA		A260/280	
6					
6. 1		PBS		(4~8)	
	24				
6. 2	DNA	DNA	DNA		4~8
	48				
7					
7. 1	STR		A		
7. 2		CB/T 27025- 2008			
7. 3					
a)					
b)		5			
7. 4	DNA				
a)	DNA			DNA	
b)		DNA	A260/A280		A260/A280
	1. 8~2.0				
c)	DNA	DNA	20 μ L	50 ng/μ L	
d)	DNA	- 20	6	- 80	
7. 5	PCR				
a)	9	STR	D13S317 TH01 D5S818 D16S539 TPOX		
D7S820 CSF1PO vWA	Anelogenin (AMEL)		PCR	STR	PCR
			STR		

STR PCR

b) PCR

PCR

DNA

PCR

DNA

PCR

c)

PCR

PCR

7. 6 STR

a) STR

7. 5

PCR

DNA

DNA Ladder

b)

c)

a)

PCR

DNA

b)

8.5 μL~8.8

μL

0.2 μL~0.5 μL

PCR

/DNA Ladder 0.5 μL~1.5 μL

d)

PCR

7. 7 STR

STR

ATCC

http://www.atcc.org/STR_Database.aspx

STR

STR

DSMZ

<https://www.dsmz.de/services/services-human-and-animal-cell-lines/> online-str-analysis.html JCRB

JCRB

http://cellbank.nibiohn.go.jp/legacy/cgi-bin2/str2/str_searchform3.cgi

Cellosaurus

http://web.expasy.org/cellosaurus/CVCL_0030

7. 8

7. 8. 1

a)

PCR

STR

b) STR

1

2

c)

b)

7. 8. 2

a)

STR

STR

2

b)

STR

STR

2

PCR

7. 8. 3

a)

STR

STR

80%
b) STIR STIR
80% 56%
c) STIR STIR
56%
8
8.1
8.2 STIR
B
9
DNA STIR C
10
10.1
10.2 GB/T
22278-2008 GB/T 27025-2008
10.3
10.4 PCR

B

STR

1

1 STR

2 STR

Loci	Hnαn	Allele 1	Allele 2	Allele 3
D5S818				
D13S317				
D7S820				
D16S539				
vWA				
TH01				
TPOX			|	
CSE1PO				

3 STR

2

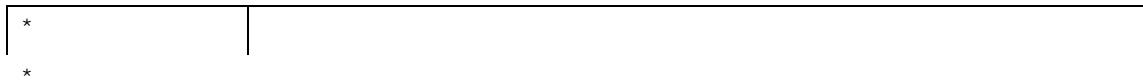
1. 9 STR AMEL D5S818 D13S317 D7S820 D16S539 vWA TH01 TPOX CSF1PO
2 9 STR

3

C

STR

- 1.
2. **@mail.com



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