

# Cell line STR

## Analysis Result Report



## INFORMATION

Order No.	HC00683860
Date	2023. 04. 14
Sample Type	Cell line

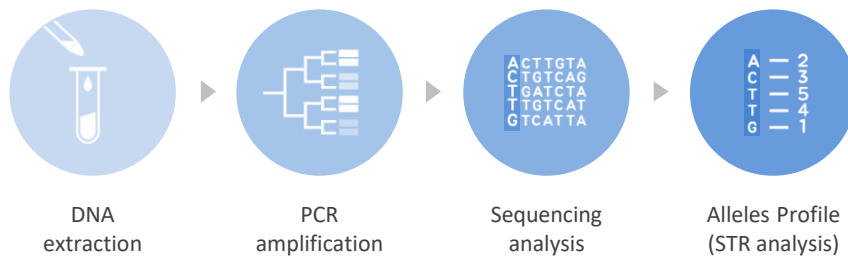
## METHOD

- The AmpFISTR® Identifiler® PCR Amplification Kit is a short tandem repeat (STR) multiplex assay that amplifies 15 tetranucleotide repeat loci and the Amelogenin gender-determining marker in a single PCR amplification:
  - All thirteen of the required loci for the Combined DNA Index System (CODIS) (Budowle et al., 1998).
  - Two additional loci, D2S1338 and D19S433.
- We use Applied Biosystems® 3730/3730xl DNA Analyzer and analyze data using GeneMapper ID v3.2. For reliability, Positive (DNA9947A) and Negative are used together during the test.
- We do experiment based on the Genotype Identification Kit of ABI which is international standard method, and we also obtained a method using PowerPlex21 of Promega to secure diversity.

## REFERENCE

- Budowle, B. et al. 1998. CODIS and PCR Based Short Tandem Repeat Loci: Law Enforcement Tools. Second European Symposium on Human Identification. 73–88.
- Holt, C., Stauffer, C., Wallin, J., Lazaruk, L., Nguyen, T., Budowle, B., and Walsh, P. 2000. Practical applications of genotypic Surveys for forensic STR testing. Forensic Sci.
- Butler, J.M. 2005. Forensic DNA Typing. Burlington, MA:Elsevier Academic Press.

## PROCESS



## NOTE

### Cell line authentication?

Cell line authentication Service is genetic analyzing service using Multiplex-PCR Kit which is comprised of STR(Short Tandem Repeat) loci.

### STR Marker Information (AmpFISTR®Identifiler® PCR Amplification KIT)

STR Locus	Label	Size Range	Chromosomal Location	Repeat Sequence 5'→3'
D8S1179	6-FAM	123-170	8q24.13	(TCTA)(TCTG)
D21S11		185-239	21q21.1	(TCTA)(TCTG)
D7S820		255-291	7q21.11	GATA
CSF1PO		305-342	5q33.1	TAGA
D3S1358	VIC	112-140	3p21.31	(TCTA)(TCTA)
TH01		163-202	11p15.5	TCAT
D13S317		217-245	13q31.1	TATC
D16S539		252-292	16q24.1	GATC
D2S1338		307-359	2q35	(TGCC)(TTCC)
Amelogenin	PET	107,113	XP22.22/YP11.2	NA
D5S818		134-172	5q23.2	AGAT
FGA		215-355	4q31.3	CTTT
D19S433	NED	102-135	19q12	AAGG
vWA		155-207	12q13.31	(TCTG)(TCTA)
TPOX		222-250	2p25.3	GAAT
D18S51		232-345	18q21.33	AGAA

# Cell line authentication Result Report

Do date.	2023. 04. 14	Method	A-STR Genotyping analysis, 3730XL DNA analyzer
Reagent	AmpFISTR®Identifiler® KIT	Percent Match	100 %

Cell name	HeLa(Reference)		3	
Amelogenin	X	X	X	X
STR Locus	Allele1	Allele2	Allele1	Allele2
D8S1179			12	13
D21S11			27	28
D7S820	8	12	8	12
CSF1PO	9	10	9	10
D3S1358			15	18
TH01	7	7	7	7
D13S317	12	13.3	12	13.3
D16S539	9	10	9	10
D2S1338			17	171
D5S818	11	12	11	12
FGA			18	21
D19S433			13	14
vWA	16	18	16	18
TPOX	8	12	8	12
D18S51			16	16

## Interpretation of Results

\* Reference : ICLAC - Match Criteria for Human Cell Line Authentication

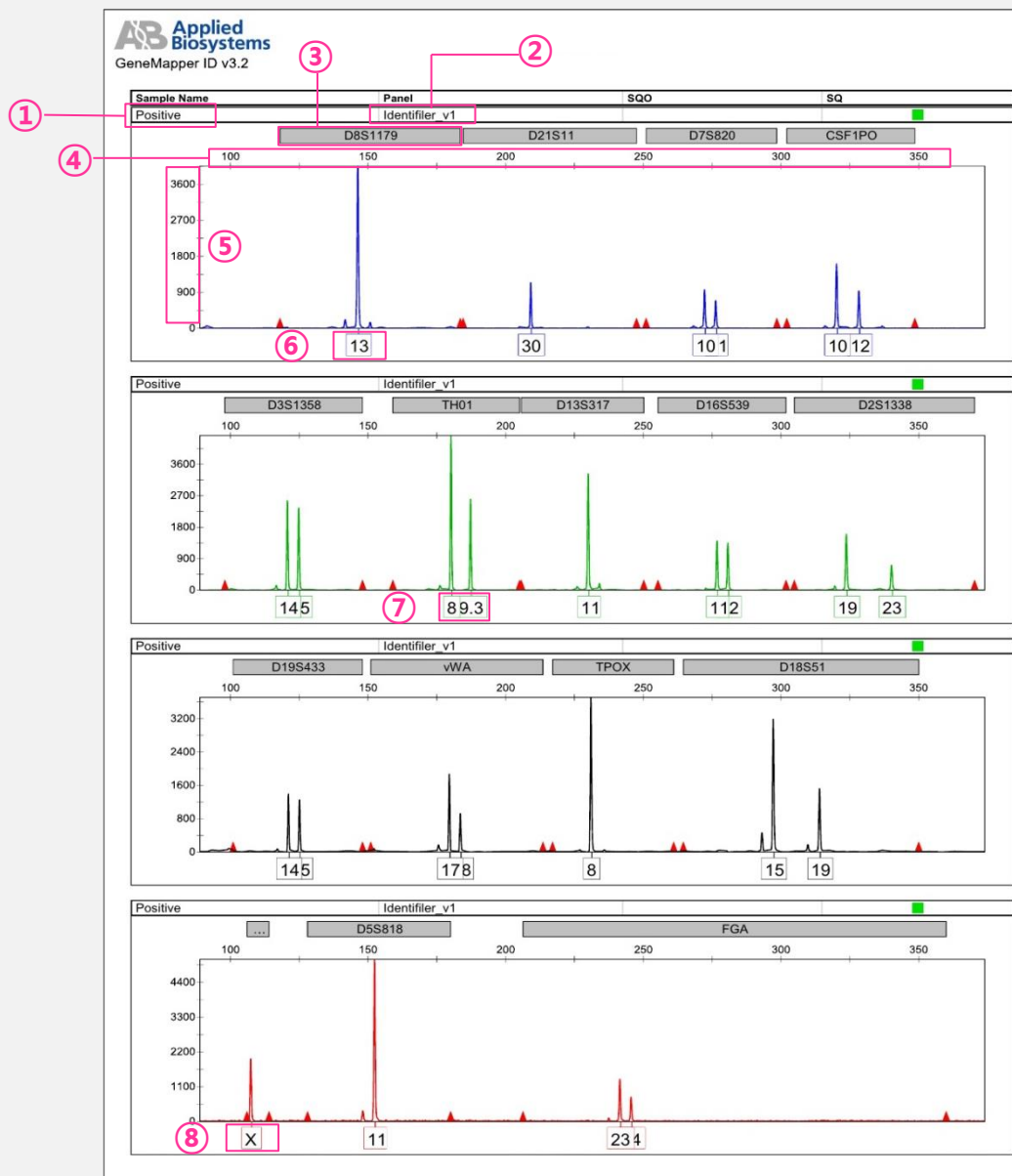
- 1 Is the percent match result in the range 0 - 55% ?
  - This result is consistent with the two samples being unrelated (different donors)
- 2 Is the percent match result in the range 56 - 79% ?
  - This result is indeterminant and may need further testing
- 3 Is the percent match result in the range 80 - 100% ?
  - This result is consistent with the two samples being related (same donor)

*Yang G.J.*

2023.04.14

# Raw Data Guide

- ① Sample name
- ② STR amplification kit
- ③ STR marker
- ④ X axis: Fragment size
- ⑤ Y axis: Relative fluorescence units (RFU)
- ⑥ STR repeat number (13 = 13 repeats)
- ⑦ Decimal point (9.3 = ATGC ATGC .... ATGC ATG)
- ⑧ sex determining marker (Female: XX / Male: XY)





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