

STR Authentication Report For Cell Line

O) UBIGENE

1. Cell Name: GM12878

2. Test Method: DNA was extracted using the genome extraction kit (Axygen), amplified

using a 21- STR amplification protocol, the STR loci and gender gene Amelogenin were

| sample ge | | e analysis resi | | | | UBIO |
|-----------|---|-----------------|----------------|--------------------------------|--------------|---------|
| | Genotype | e analysis resu | Its of STR and | Amelogenin l | oci in cells | |
| STR Loci | STR profile for Sample cell Cell name: GM12878-K | | | STR profile for Cell Bank cell | | |
| | | | | Cell name: GM12878 | | |
| | Allele1 | Allele2 | Allele3 | Allele1 | Allele2 | Allele3 |
| D5S818 | 12 | 12 | BIC | 12 | 12 | |
| D13S317 | 11 | 12 | \odot | 11 | 12 | |
| D7S820 | 8 | 10 | | 8 | 10 | BIGE |
| D16S539 | 10 | 11 | | 10 | 11 6 | |
| VWA | 15 | 17 | | 15 | 17 | |
| TH01 | GE 7 | 9.3 | | 7 | 9.3 | |
| AMEL | Х | Х | | х | Х | |
| ТРОХ | 8 | 8 | | 8 | 8 | |
| CSF1PO | 10 | 11 | UBIC | 10 | 11 | |
| D12S391 | 16 | 17 | 8 | 16 | 17 | -5 |
| FGA | 22 | 24 | | 22 | 24 | BIGE |
| D2S1338 | 17 | 20 | | 17 | 20 | |
| D21S11 | 30 | 30 | | 30 | 30 | |
| D18S51 | 16 | 17 | | 16 | 17 | |
| D8S1179 | 12 | 12 | | 12 | 12 | |
| D3S1358 | 16 | 17 | | 16 | 17 | |
| D6S1043 | 11 | 12 | , RIC | 11 | 12 | |

1

Ĩ

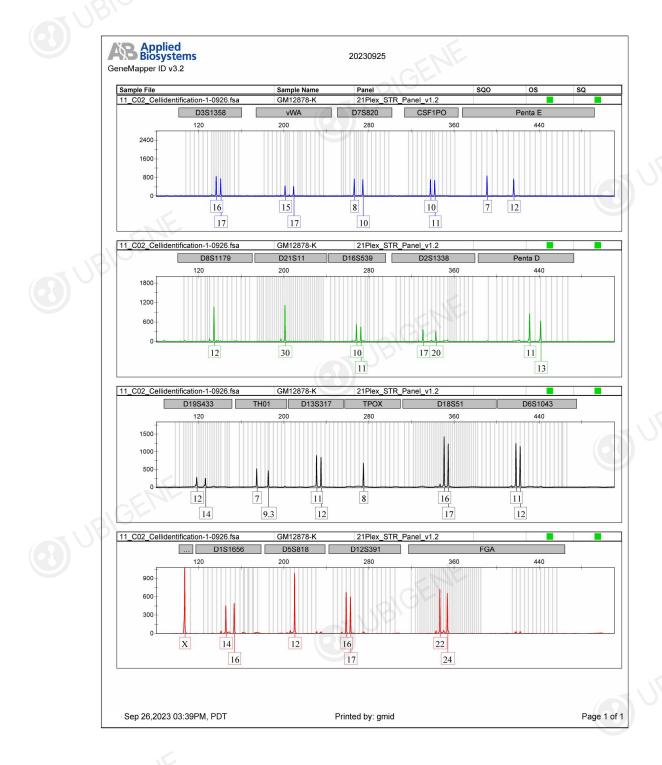
Gene-editing cell lines | CRISPR Library Microorganisms | EZ-editor™ series products

| PENTAE | GE 7 | 12 | | 7 | 12 | |
|-------------|---------------------------|-----------------------|----------------|---------------|----------------|---------|
| D19S433 | 12 | 14 | | 12 | 14 | |
| PENTAD | 11 | 13 | | ENG1 | 13 | |
| D1S1656 | 14 | 16 | BIC | 14 | 16 | |
| | · | | | | | ENF |
| 4 Conclusio | n [.] The STR re | sults of GM1 2 | 9878 cells are | consistent wi | ith the genoty | ines of |

4. Conclusion: The STR results of **GM12878** cells are consistent with the genotypes of **GM12878** cell lines in database, the cell ID corresponded to **CVCL_7526**, and the STR results **completely matched**. In the test, **No multi allele was found, and there was no human source contamination** in this cell line.

O UBIGENE

5. Attached Image



O UBIGENE