

HepG2 Cell STR Identification

● Experimental Procedure

Utilize Vazyme Cell Genomic DNA Extraction Kit to extract DNA from the sample. Employ the Yuewei Gene Human STR locus detection kit to amplify the sample. Collect signals using the Applied Biosystems SeqStudio Genetic Analyzer. Analyze the loci using Genemapper software 6.

Prepare the reaction mixture in a PCR tube according to the following system:

Components	Volume (Content)
PCR Master Mix	5.0 μ l
Primer Mix	2.5 μ l
Sample	30 ng
DEPC Water	To 10.0 μ l

Perform the amplification reaction in a PCR instrument with the following program:

Temperature	Time	Cycles
95°C	5 min	N/A
94°C	10 s	28-30 cycles
61°C	1 min	
70°C	30 s	
60°C	15 min	N/A

Prepare the electrophoresis sample in the PCR tube: Denature at 95°C for 3 min → Cool down to 4°C for 3 min, and then collect data using the machine.

Components	Volume
Hi-Di™ Formamide	8.5 μ l
SIZE	0.5 μ l
Sample	1.0 μ l

● Experimental Results

Sample ID	Database	Matched Cell	Matching Rate	Description
HepG2	ATCC, DSMZ	HepG2	97.06%	Matched

Analysis of Sample Loci Report Values

Loci	HepG2 Sample STR Report Value			HepG2 Database Reference Value		
	AL1	AL2	AL3	AL1	AL2	AL3
Amel	X	Y		X	Y	
D3S1358	15	16		15	16	
TH01	9			9		
D21S11	29	30	31	29	30	
D18S51	13	14		13	14	
Penta E	15	20		15	20	
D5S818	11	12		11	12	
D13S317	9	13		9	13	
D7S820	10			10		
D16S539	12			12	13	
CSF1PO	10	11		10	11	
Penta D	9	13		9	13	
vWA	17			17		
D8S1179	15	16		15	16	
TPOX	8	9		8	9	
FGA	22	25		22	25	
D19S433	15.2			15.2		
D12S391	21	25		21	25	
D6S1043	13					
D2S1338	19	20		19	20	
D1S1656	11	12		11	12	

Sample STR peak map

