

Isolation of genomic DNA from cultured human cells using the QuickPick™ gDNA kit

KEY WORDS: cultured cells, human cells, genomic DNA, 20 minute protocol, PickPen®

ABSTRACT

The QuickPick™ gDNA kit is intended for use with human whole blood and blood components such as leukocytes and buffy coat, as well as human cultured cells. Below is described the purification of DNA from cells.

PRINCIPLE OF QuickPick gDNA

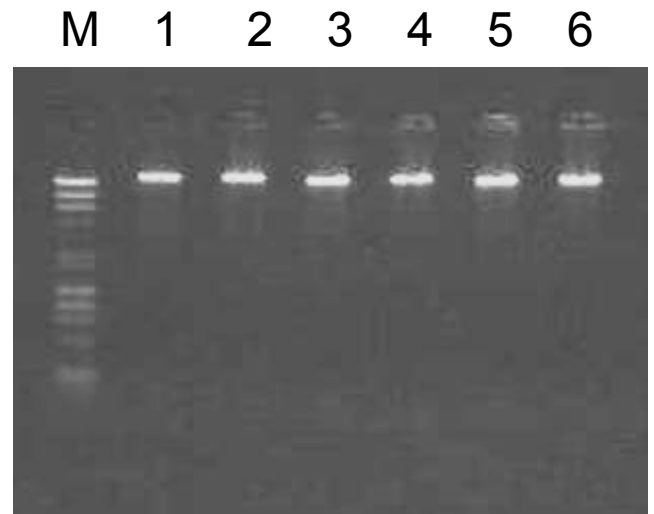
DNA in the sample is released from cells using Proteinase K and Lysis Buffer. The released DNA is bound specifically to the magnetic particles in the presence of Binding Buffer. PickPen® 1-M is used to capture the magnetic particles with bound DNA, and to carry out subsequent washes to remove contaminants. Finally, DNA is eluted from the particles using Elution Buffer, and DNA is ready for use in downstream applications. The protocol is carried out in 20 minutes, and throughput can be further increased by using PickPen® 8-M.

MATERIALS & METHODS

The sample consisted of cultured human U937 cells. For each sample, 1 million cells were harvested, washed and the cell pellet was resuspended into the gDNA Lysis Buffer. Genomic DNA was isolated with the QuickPick gDNA kit from 6 parallel samples, following the QuickPick™ gDNA protocol as described in the kit insert.

RESULTS

The isolated DNA was loaded onto a 1% agarose gel. Intact high molecular weight DNA was detected from all samples with good reproducibility.



M = Marker

1-6 = DNA isolated from 1 million U937 cells