

Licensing Opportunity

Detection on DNA minor contributor in a DNA mixture

Genetic markers can be used to analyze the DNA of one person or of two persons occurring in similar quantities. One limitation in the use of these markers is that they cannot resolve unbalanced mixtures of DNA. In fact, when analyzing such mixtures with standard markers, including targeted NGS analyses, the detection of the minor contributor is not possible when it represents less than about 10% of the total amount of DNA. In such case, the DNA profile of the minor contributor can be masked and cannot be genotyped.

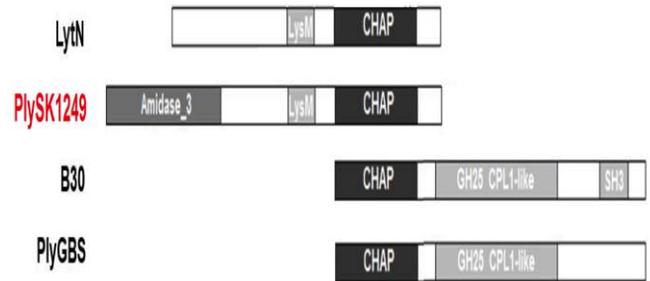
DESCRIPTION

The inventors have now identified a method of detecting and genotyping the presence of a DNA minor contributor in a DNA mixture.

Using the patented DIP-STR technology, the detection of the minor contributor is now possible with a very small amount of minor DNA in a DNA mixture. Within a forensic context, DIP-STR may therefore bring determining information for various criminal cases. Compared to existing Y-STR technology currently used, DIP-STR technology allow to link a sample with a person and not a paternal lineage.

STAGE OF DEVELOPMENT

- Inventors validated the detection of the minor contributor when it represents around 0.1% of the total amount of DNA.
- They have made the development of the patented DIP-STR technology and tests using capillary electrophoresis with a multiplexing limitation.



PlySK1249 Architecture

ADVANTAGES

The method may be used in a forensic context.

It may be also advantageously used:

- after an organ transplant, when small amounts of the donor's DNA may survive in the recipient, in genetic chimera or mosaics or
- during and after pregnancy when small amounts of the baby's DNA occur in the maternal blood circulation.

It find also its application in anthropology for exploring the effects of evolutionary processes within a population genetics context.

INTELLECTUAL PROPERTY

Extension in EP and US filed in the name of the CHUV and naming as inventors D. Hall and V. Castella.

COLLABORATION TYPE

PACTT offers to grant exclusive or non-exclusive license to industrial partners able to develop and commercialize the technology.

REFERENCE

IDF 13/10