Real-time, label-free detection of nucleic acid amplification in droplets

Tech ID: 22591 / UC Case 2012-202-0

BRIEF DESCRIPTION

Researchers at the University of California, Irvine have developed a real-time, label-free detection of DNA amplification.The method allows for the detection of the presence of a gene in genomic DNA and provides a platform that can continuously monitor the amplification of DNA in flowing droplets.In addition, the method has the potential to allow for sequence-specific detection, or detection of single nucleotide polymorphisms (SNPs) and may allow for multiplexed, sequence specific detection.

FULL DESCRIPTION

DNA amplification finds tremendous applications in medicine, microbiology, and forensic science.One of the more widely used methods for detection of DNA amplification in droplets involves the use of a fluorescent probe, such as the Taqman probe.However, the use of a fluorescent marker is expensive and requires additional processing steps.A label-free method to monitor the amplification of DNA in flowing droplets would be a desirable improvement for researchers and scientists.

Researchers at the University of California, Irvine have developed a real-time, label-free detection of DNA amplification.The method allows for the detection of the presence of a gene in genomic DNA and provides a platform that can continuously monitor the amplification of DNA in flowing droplets.In addition, the method has the potential to allow for sequence-specific detection, or detection of single nucleotide polymorphisms (SNPs) and may allow for multiplexed, sequence specific detection.

SUGGESTED USES

The invention may be used for PCR detection and DNA amplification.

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	9,896,725	02/20/2018	2012-202
United States Of America	Issued Patent	9,030,215	05/12/2015	2012-202

CONTACT

Ben Chu
ben.chu@uci.edu
tel: .

OTHER INFORMATION

KEYWORDS

DNA amplification, DNA, SNP, single nucleotide polymorphism, PCR, droplet, sequence-specific detection

CATEGORIZED AS

- **Engineering**
  - Engineering
- **Medical**
  - Diagnostics
  - Research Tools
- **Research Tools**
  - Nucleic Acids/DNA/RNA

RELATED CASES

2012-202-0

UCI Beall
Applied Innovation

5270 California Avenue / Irvine,CA
92697-7700 / Tel: 949.824.2683