Salt-Tolerant Dna Polymerases

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BACKGROUND

Various scientific and industrial applications exist in which it would be advantageous to use a DNA polymerase that function efficiently at high salt concentrations. In sequencing, GC compressions can be resolved by using high salt concentrations. In nanopore sequencing high salt concentration boosts the signal to noise ratio for ionic-current based nanopore measurements.

TECHNOLOGY DESCRIPTION

Methods of performing DNA synthesis using salt tolerant versions of DNA polymerases derived from Bacillus phage phi29 are described. Such polymerases can function in salt solutions with concentrations as high as 25% wt/volume of salt (KCl, NaCl or other monovalent salts).

APPLICATIONS

Nucleic acid sequencing

Nucleic acid library generation

INTELLECTUAL PROPERTY INFORMATION

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	10,059,984	08/28/2018	2011-760
Patent Cooperation Treaty	Published Application	WO 2012/173905	12/20/2012	2011-760

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OTHER INFORMATION

KEYWORDS

Phi29, Halophilic, DNA polymerase, DNA libraries, Nucleic acid sequencing

CATEGORIZED AS

- **Research Tools**
  - Nucleic Acids/DNA/RNA

RELATED CASES

2011-760-0

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- Software Tool for Generating Optimized Gene Sequences
- Software Tool for Predicting Sequences in a Genome that are Subject to Restriction or Other Surveillance Mechanisms
- Trna Handles