

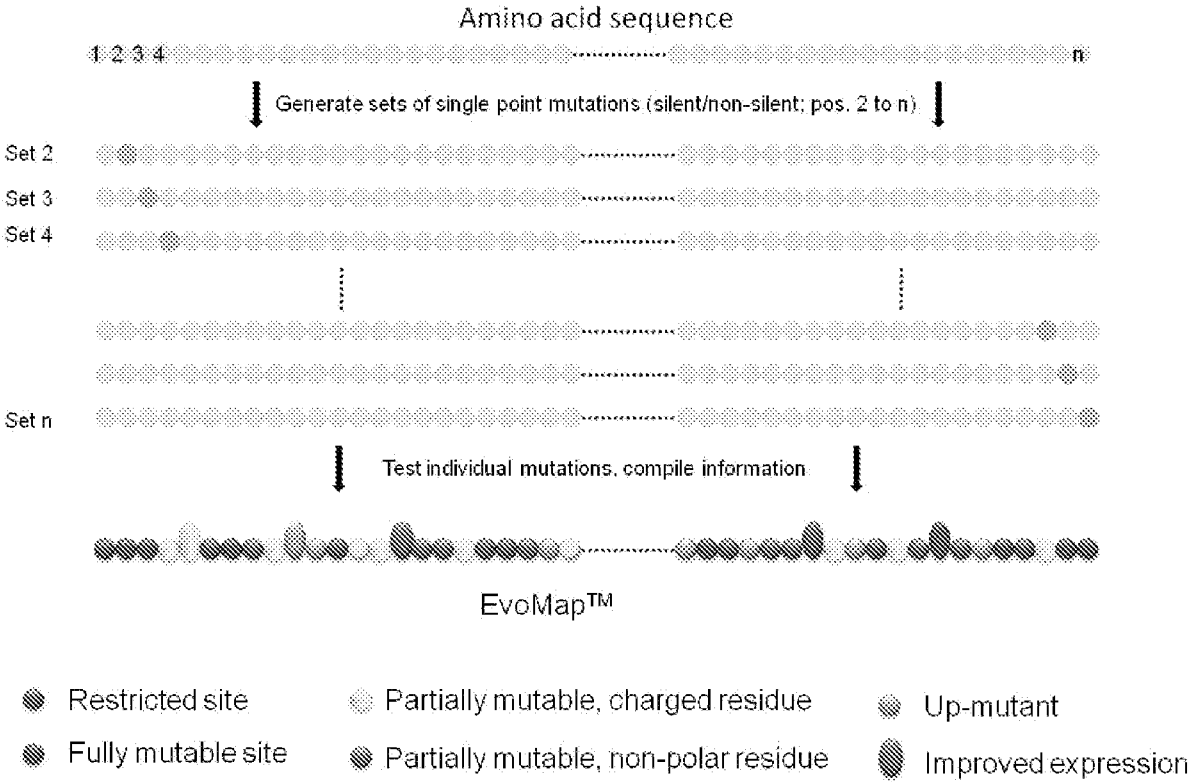


FIGURE 1

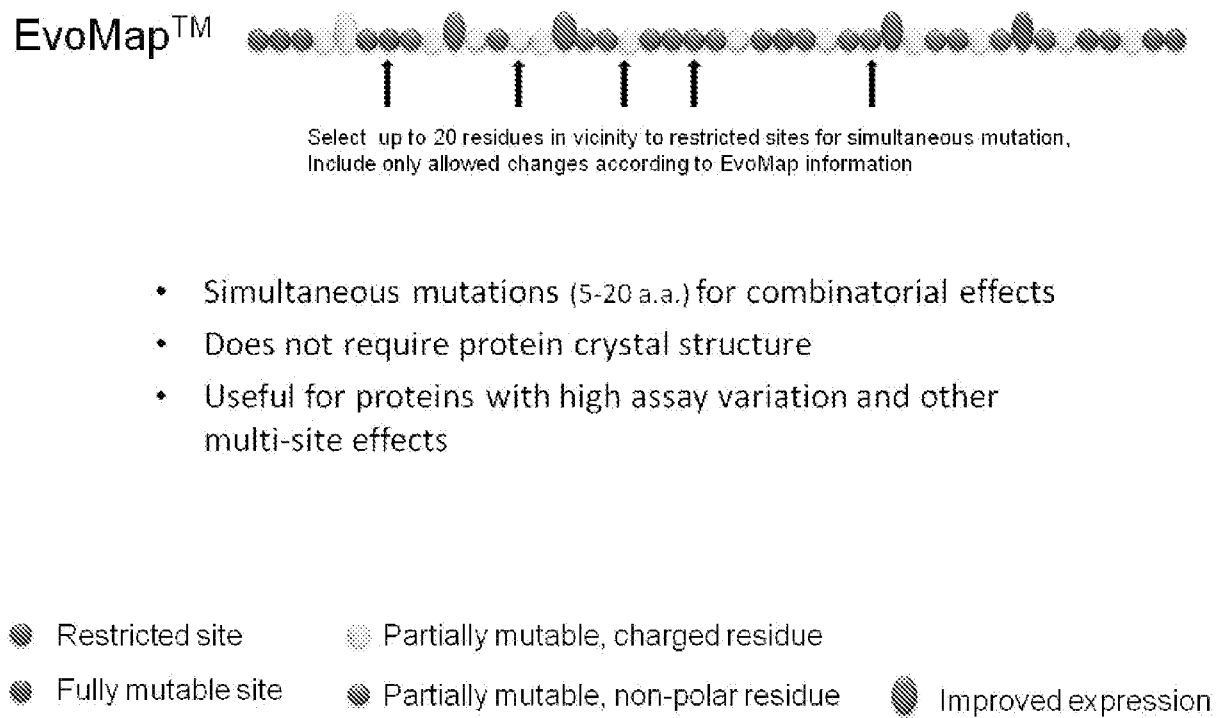


FIGURE 2

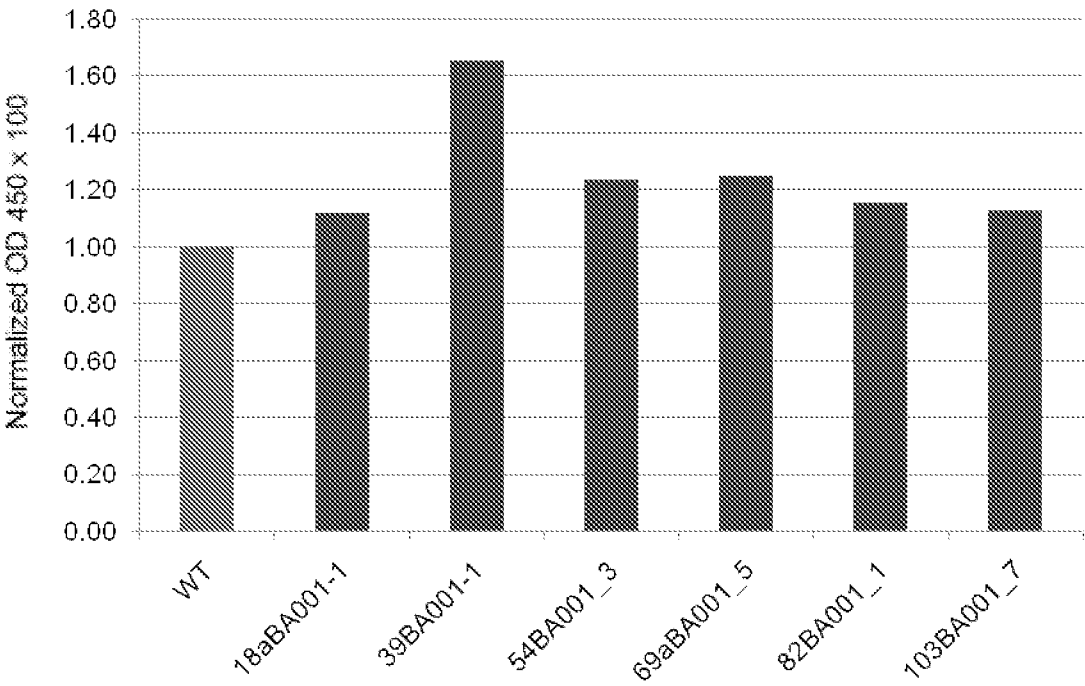


FIGURE 3

CPI™- Comprehensive Positional Insertion Evolution

Inserts up to 20 individual amino acids at every single amino position throughout the protein

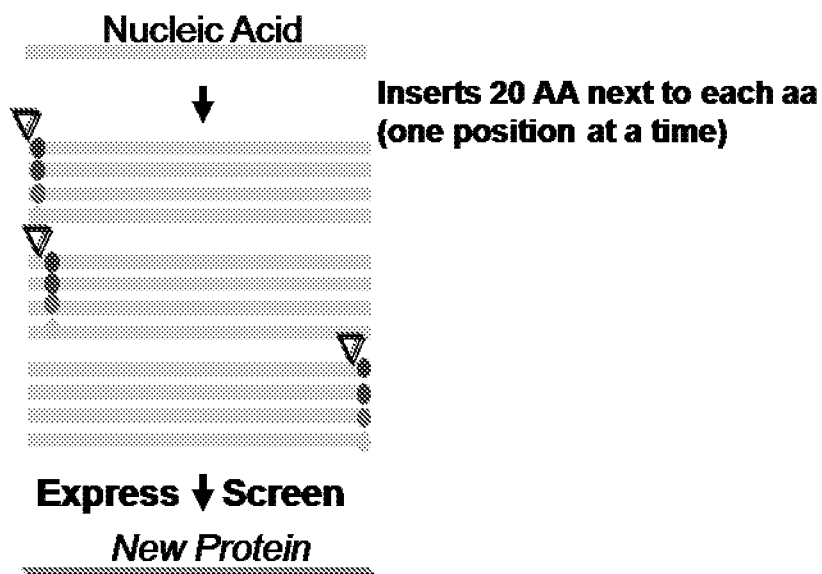


FIGURE 4

Comprehensive Positional Evolution (CPE™)

Lengthened Nucleic Acid from CPI

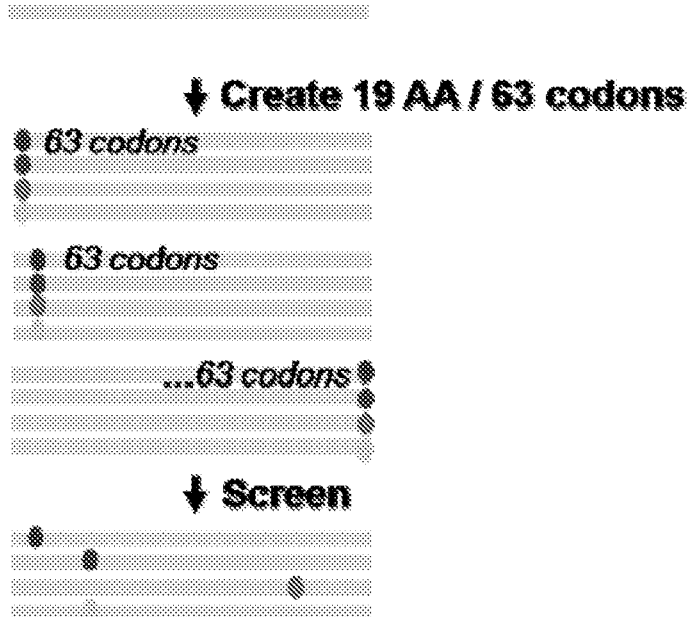
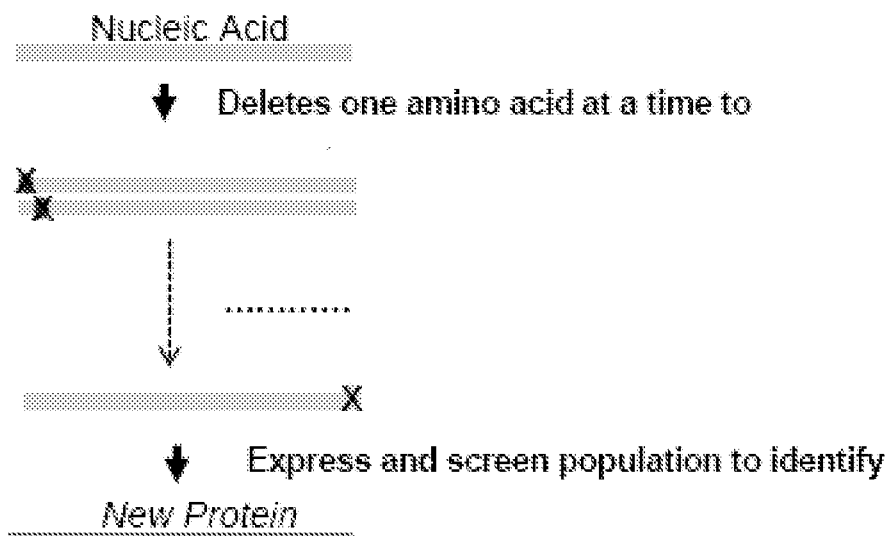


FIGURE 5

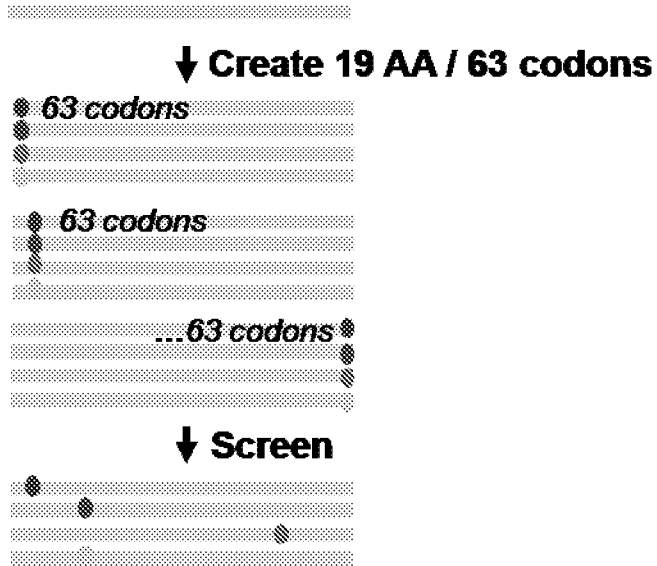
CPD™ - Comprehensive Positional Deletion Evolution

Deletes every amino acid through a protein one position at a time

**FIGURE 6**

Comprehensive Positional Evolution (CPE™)

Shortened Nucleic Acid
from CPD



Optimized Gene/Protein

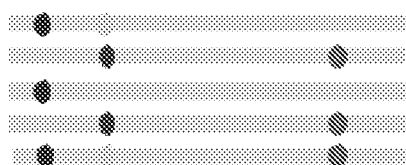
FIGURE 7

Combinatorial Protein Synthesis

CPST™



↓ **Combine**

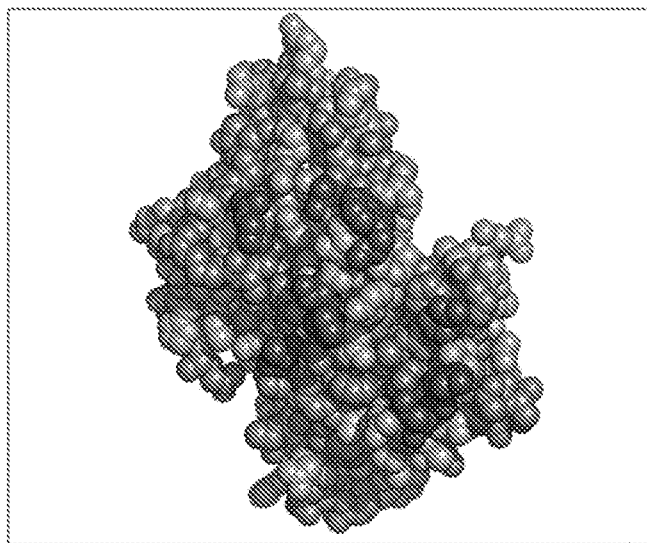


↓ **Screen**



Optimized Gene/Protein

FIGURE 8



Comprehensive Positional Evolution Map
(Antibody LC/HC variable domains)

-  Up-mutants
-  Non-mutable sites
-  Partially mutable sites
-  Fully mutable sites

FIGURE 9

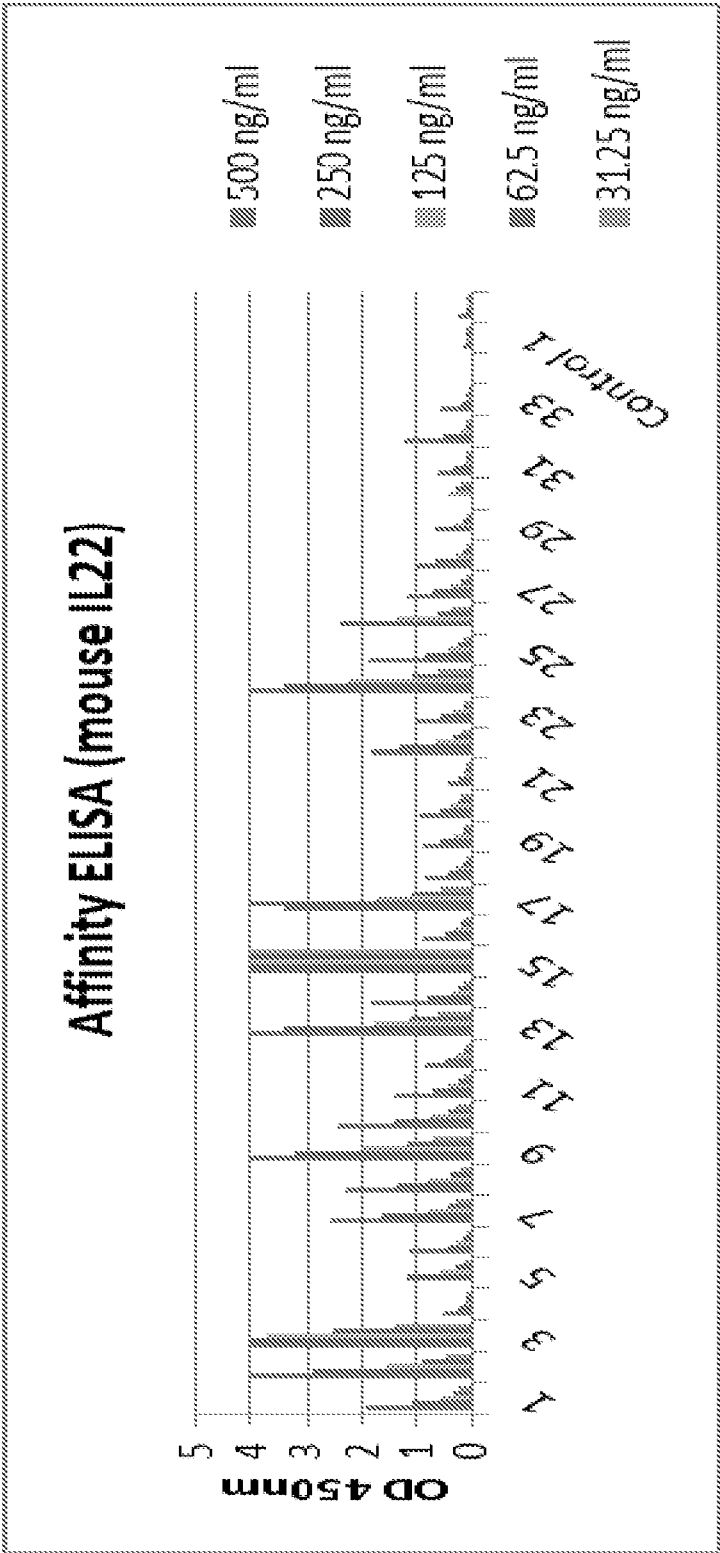


Figure 10

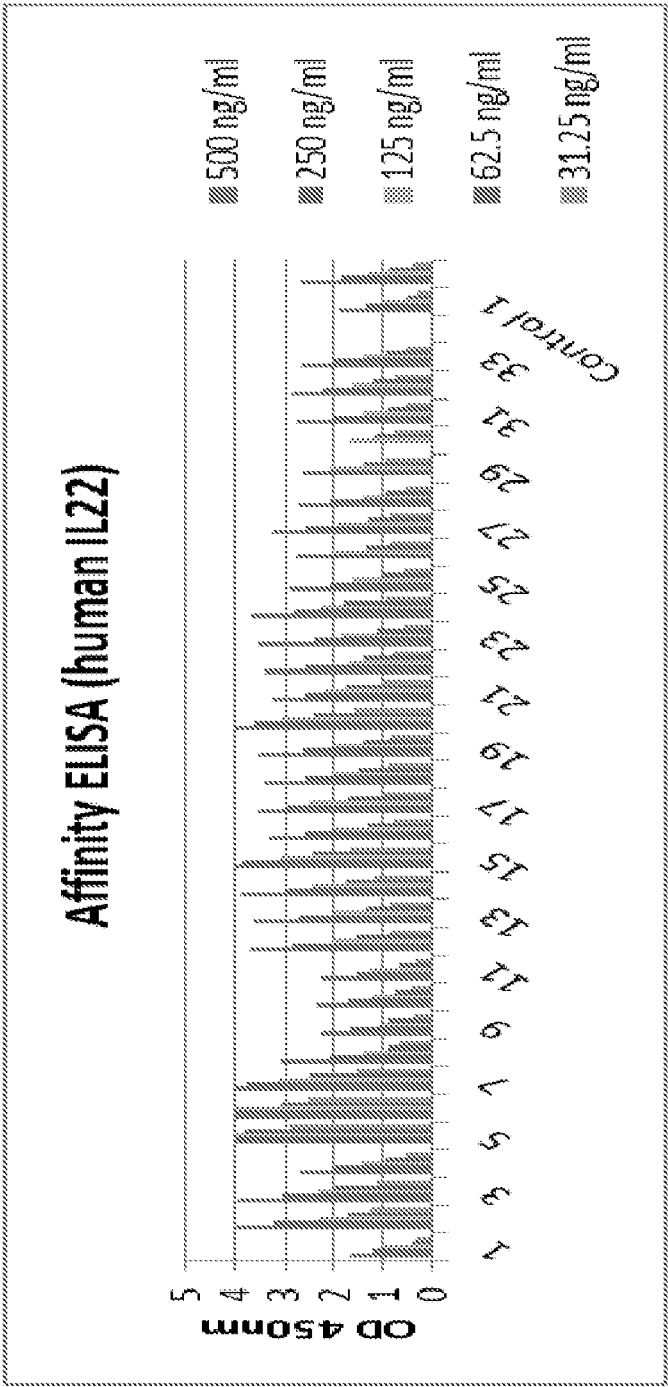


Figure 11

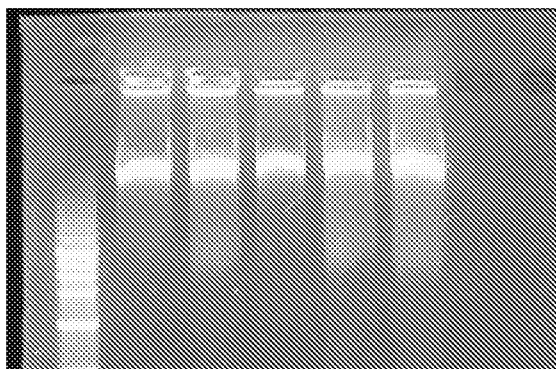


Figure 12