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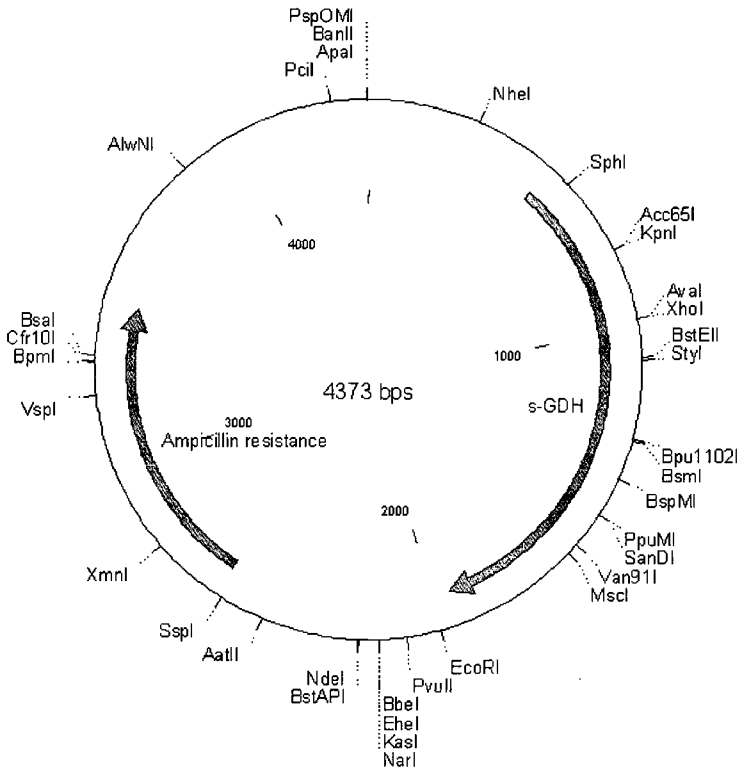
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(54) Title: IMPROVED MUTANTS OF PYRROLOQUINOLINE QUINONE DEPENDENT SOLUBLE GLUCOSE DEHYDROGENASE

Schematic diagram of the plasmid with gene for s-GDH (pACSGDH)



(57) Abstract: The present invention discloses a mutant of PQQ-dependent soluble glucose dehydrogenase (s-GDH; EC 1.1.5.2) with improved specificity for glucose as compared to maltose, having a substitution of threonine at position 348 by either glycine, alanine or serine, wherein said mutant additionally comprises, at least one mutation for improving the stability of the mutant and one or more mutation(s) for improving the affinity of the mutant to glucose, and/or one or more mutation(s) for further improving the specificity of the mutant for glucose as compared to maltose, and wherein position 348 correspond to the amino acid positions known from the A. *calcoaceticus*s-GDH wild-type sequence. Also disclosed are genes encoding such mutant s-GDH, and different applications of these s-GDH mutants, particularly for determining the concentration of glucose in a sample.

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