

Abstract

GENE ENCODING HUMAN GLUCOKINASE MUTANT, ENZYME ENCODED BY THE SAME, RECOMBINANT VECTORS AND HOSTS, PHARMACEUTICAL COMPOSITIONS AND USES THEREOF, METHODS FOR TREATING AND PREVENTING DISEASES

Gene encoding human glucokinase mutant is provided. The gene has the nucleotide sequence chosen from the nucleotide sequence listed as SEQ ID NO:2 and the nucleotide sequence wherein the ORF region encodes the same amino acid sequence as the one encoded by ORF region (position 487 to 1884) of SEQ ID NO:2 and the rest region is same as the non-ORF region of SEQ ID NO:2. Human glucokinase mutant encoded by the gene, the recombinant vectors carrying the gene, the hosts comprising the vectors, pharmaceutical compositions thereof, uses thereof, and methods for treating and preventing diseases by using the same are provided. The human glucokinase mutant encoded by the gene has higher activity than that of the wild type human glucokinase, and thus provides a new way of controlling blood glucose or preventing and treating disturbance of carbohydrate metabolism, especially preventing and treating diabetes.

Fig. 2