

ABSTRACT

"STEREOSTRUCTURE OF DECARBAMYLASE AND USES THEREOF"

The present invention reveals the stereostructure of decarbamylase by X-ray crystallography and provides a decarbamylase mutant, which is more useful for industrial applications, obtained by molecular design utilizing the stereostructure for the purpose of improving the reactivity of decarbamylase to D-N-carbamoyl- $\alpha$ -amino acid which is a substrate thereof. Specifically, the present invention relates to the stereostructure of decarbamylase determined by X-ray crystallography; a stereostructure model of a decarbamylase mutant; a stereostructure model of a complex thereof with a substrate, a product, and the like; a molecular design method utilizing these stereostructures; a decarbamylase mutant obtained by the method; and a method for designing and producing a protein mutant having a structure similar to that of decarbamylase, as shown in

Figure 2.



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