Abstract

Method For Generating New Mutations In Organisms, And Application Thereof

The present invention pertains to the technical field of genetic engineering, and specifically relates to a method for generating a site-specific mutation in an organism in the absence of an artificial DNA template and a use thereof. The method comprises the following steps: sequentially generating two or more DNA breaks at a specific site in a genome of an organism and spontaneously repairing them respectively, wherein a later DNA break is generated based on a new sequence generated from a previous DNA break repair. In the present invention, a new target is designed based on a sequence formed by a new repair event generated by sequential editing, and thus, mutations may be sequentially formed for multiple times at a specific site in the genome, which greatly enrich the types of repair events after DNA breaks, and realize new base substitution, deletion and insertion mutations that cannot be obtained in a single gene editing.

[No Suitable Figure]