ABSTRACT

The present disclosure belongs to the technical field of protein engineering. Provided are a recombinant type XVII collagen having a triple helix structure and the use thereof. The amino acid sequence of the recombinant type XVII collagen includes n core units, wherein n is the integer 1 or an integer greater than 1, and the amino acid sequence of the core units is as shown in SEQ ID NO: 1. Further provided are a method for constructing a plurality of expression systems and a method for preparing the recombinant type XVII collagen. Further provided is the actual industrial application on the basis of the characteristics of the protein. The provided recombinant type XVII collagen exhibits high purity, good thermal stability and high biological activity, and has a molecular weight much smaller than that of natural collagen, thereby reducing the difficulty for the collagen to cross the skin barrier and exert biological functions. Experiments show that the recombinant type XVII collagen has a variety of biological activities such as promoting cell migration.

FIG. 8