

ABSTRACT

RECOMBINANT HUMAN TYPE XVII COLLAGEN, AND PREPARATION METHOD AND USE THEREOF

The present disclosure provides a recombinant human type XVII collagen. The recombinant human type XVII collagen consists of an amino acid sequence shown in (A)_n or includes the amino acid sequence shown in (A)_n, where A is a sequence set forth in SEQ ID NO: 2, a sequence undergoing an amino acid modification to a predetermined extent based on SEQ ID NO: 2, or a sequence that has more than 80% homology with SEQ ID NO: 2; n is an integer greater than or equal to 1; and A represents a basic unit, and when there are two or more basic units, the two or more basic units are identical or different and are directly connected in tandem through a peptide bond. In the present disclosure, it is confirmed that the recombinant human type XVII collagen can undergo efficient secretory and soluble expression in eukaryotic host cells such as *Pichia pastoris* (*P. pastoris*), and also exhibits more excellent cell adhesion activity, cell migration-promoting activity, tissue regeneration-promoting activity, and hair follicle repair and regeneration-promoting activity than commercial native human collagen, and can be industrially produced.

Figure 6