

ABSTRACT

Provided is a biological method for large-scale preparation of a collagen having a 164.88° triple-helix structure. Provided is a method for constructing a yeast cell expressing a collagen, comprising introducing a recombinant expression vector into a yeast cell, the recombinant expression vector containing a polynucleotide encoding a collagen, the collagen comprising repeat units represented by the sequence of SEQ ID No.1, the number of the repeat units being 2-32, and the repeat units being directly linked. The collagen is a recombinant type III humanized collagen, preferably the collagen having a 164.88° triple-helix structure. Modifying a “chassis bacterium” enables large-scale production of the recombinant humanized collagen having the 164.88° triple-helix structure which is a type A collagen. The large-scale production can satisfy market demands.