

Abstract

Recombinant Antibody Having Unique Glycan Profile Produced by CHO Host Cell with Edited
Genome and Preparation Method Thereof

The present invention, in the field of bioengineering and biotechnology, relates to a method for preparing a recombinant antibody with a unique glycan profile produced by a genome-edited CHO host cell. Specifically, according to a method of the present invention, the TALEN technology is used to edit the FUT8 gene in CHO cells that have been adapted for serum-free suspension growth. The edited CHO host cells can produce recombinant antibodies with a unique glycan profile. The unique glycan profile can be characterized by non-fucosylated N-linked oligosaccharide chains of the antibodies, extremely low N-glycosylation heterogeneity and uniform carbohydrate chains. The antibody prepared by the method of the invention exhibit significantly increased ADCC and greater stability.

Figure 10