

Development of a serum-free medium for the production of recombinant antibody from recombinant Chinese Hamster Ovary cells

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There has been much effort to identify suitable serum-substituting components due to the increasing needs for serum-free and protein-free media. Therefore, to determine the composition of culture medium is one of the most important considerations in serum-free cultivation of mammalian cells. Animal cells require various nutrients such as amino acids, vitamins, hormones, inorganic salts, and diverse undefined components to survive in vitro and produce the target therapeutic proteins efficiently. Since universal serum-free/protein-free medium suitable for all cell lines is not existed and effective medium components are different for each cell line, it is important to appraise general components which constitute serum-free/protein-free at a time in the recombinant Chinese Hamster Ovary cell cultivation. In this study, basal serum-free medium was developed and various components in typical serum-free media were evaluated for enhancement of the cell growth and the productivity of recombinant antibody, which is a first important step for the fortified medium development.