عنوان مقاله:

Cloning and Expression of Recombinant Human Interleukin-۲ in Chinese Hamster Ovary (CHO) Cells

محل انتشار:

مجله گزارش های بیوشیمی و زیست شناسی مولکولی, دوره 6, شماره 1 (سال: 1396)

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خلاصه مقاله:

Background: The critical role of interleukin-۲ (IL-۲) in homeostatic proliferation and T cell survival has made it a promising cytokine for the treatment of various clinical conditions, especially those associated with lymphopenia. Methods: In the present study we expressed recombinant human interleukin-۲ (rhIL-۲) in Chinese hamster ovary (CHO)-K۱ cells. CHO-K۱ cells were stably transfected with both circular and linear forms of the pBud-hIL-۲ recombinant by electroporation. Expression of rhIL-۲ in CHO-K۱ cells was confirmed by enzyme-linked immunosorbent assay (ELISA) and dot and western blots. Results: On western blots of transformed cells, a single ۲۵ kDa band was observed, consistent with the expected molecular weight of glycosylated hIL-۲. No significant expression difference was observed between cells transfected with circular or linear plasmids. Conclusions: We established a stable CHO-K۱ cell line expressing rhIL-۲, which we consider to be a promising system for the production of rhIL-۲ as a biopharmaceutical.

کلمات کلیدی:

CHO cells, Interleukin-۲, Post-translational modifications, Stable transfection.