

Abstract

Interleukin 2 is a growth factor of T cells as well as other lymphocytes, such as NK, NKT cells, dendritic and mast cells, which ensure its expression and secretion. IL-2 regulates immune cell homeostasis and is used to treat a variety of disorders including cancer and autoimmune diseases. In recent years, several cases of interleukin 2 complexed with anti-IL2 antibody have been shown to exhibit dramatically higher biological activity *in vivo*. These complexes have selective stimulatory activity for different IL2 receptors on target cell. This work follows up previous unsuccessful attempts to express and purify a sufficient amount of the murine IL2 immunocomplex with the S4B6 antibody linked by a 15 amino acid long glycine-serine linker.

In this work, a plasmid containing the secreted fusion immunocomplex mIL2-S4B6 gene was prepared and stably transfected to the HEK293T cell line using piggyBac system. The protein was then isolated by chelation affinity chromatography and purified by gel permeation chromatography.