

Title (en)  
SYNTHETIC INTERLEUKIN-6

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Application  
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Abstract (en)

[origin: WO9006370A1] The present invention is directed to recombinant genes and their encoded proteins which are peptides with IL-6 activity. Such proteins include the cysteine-free synthetic IL-6 active peptide and the recombinant peptide with cysteines. The invention is directed to the economical commercial production of large amounts of peptides with IL-6 activity in a form which does not require the use of harsh denaturants and which does not need to be refolded after purification. The proteins of the present invention can be used to stimulate protein production by cells, including cells of the immune system and hepatocytes. The proteins of the present invention may have antiviral activity and may prevent viral infection of cells. In a preferred embodiment, the cysteine-free synthetic IL-6 like peptide is produced by microbial cells as a soluble trihybrid fusion comprising synthetic cysteine-free IL-6 like peptide, a chemically cleavable peptide and a protein capable of expression in the host organism. After purification of the large fusion protein, the synthetic IL-6 like peptide is removed by digestion of the collagen portion of the fusion with collagenase. The synthetic cysteine free IL-6 like protein is purified by HPLC to yield a pure protein that stimulates the production of immunoglobulins by B-cells, and stimulates the production of hepatic proteins.

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