First Expression of the Antagonist of Mouse Prolactin (S177D-mPRL) by adherent dhfr- CHO Cell Using p658 Vector

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Prolactin is a hormone included in cytokine superfamily and involved in innumerous biological processes. Due to its endocrine, autocrine and paracrine action, it is, frequently, related to development of human pathologies, such as carcinomas and autoimmune diseases. The antagonist of human prolactin has been used to study possible therapeutic application in breast and prostate cancer. Considering the difference of 41% between the amino acid sequences of mPRL in relation to the human one, it is desirable the use of homologous protein for *in vivo* assays and related studies. The S177D-mPRL is important for understanding of prolactin role in the evolution of autoimmune diseases in F1[NZB/NZW] mouse. An expression vector p658-S177D-mPRL was constructed and dhfr- CHO cells were transfected using Lipofectamine™. These cells were cultured in selection medium: α-MEM without nucleotides and 10% dialyzed FBS. After two weeks, the expressions of 24 clones were analyzed by dot blot and western blot. The best clone was cultured in production medium: serum free CHO-S-SFM II. An expression level of 1 µg/mL/day was reached with 10^7 adherent cells cultured in 10 cm Ø plates. For the first time an antagonist of mPRL was synthesized.

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