

BT007-PRACTICAL TWO-STEP PURIFICATION OF RECOMBINANT HUMAN PROLACTIN AND TWO ANALOGUES EXPRESSED BY CHINESE HAMSTER OVARY (CHO) CELLS

CARLOS ROBERTO JORGE SOARES(PQ); SUSANA DA ROCHA HELLER(IC); JOÃO EZEQUIEL DE OLIVEIRA(PG); JOSÉ MARIA DE SOUSA (PQ); PAOLO BARTOLINI (PQ)

IPEN/CNEN-SP, São Paulo - Brasil - Biotechnology Department – CBM

Human prolactin (hPRL) promotes the proliferation and differentiation of mammary epithelial cells during mammary gland development and has been linked to breast tumor development. In the last years the development of hPRL analogues antagonists has been an emerging field of research. The two prolactin antagonists more studied in the literature are G129R-hPRL and S179D-hPRL. The hPRL and its two antagonists were synthesized by our group in CHO cells. For the purpose of their characterization a practical two-step purification process was set up: SP-Sepharose FF followed by a size exclusion chromatography employing a high-performance size-exclusion chromatography (HPSEC) as a preparative column. An extensive physico-chemical characterization was thus carried out including SDS-PAGE analysis, MALDI-TOF-MS, HPSEC and reversed-phase high-performance liquid chromatography (RP-HPLC). In conclusion, this practical purification process provided sufficiently pure material, which was extremely helpful for the comparison and proper characterization of these hPRL analogues.

Financial Support: Supported by FAPESP and Biolab-Sanus/Hormogen.
Supervisor: Carlos R.J. Soares