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Preparation of radioiodinated secretin for radioimmunoassay

Chung-Huei HSU,* Kuo-Wei YIN,* Tsai-Hsia HONG,** Tswen-Kei TANG,** Long-Shyong LEE,* Tong H. CHANG,** Jean-Dean LIU*** and Pao-Huei CHEN***

**Division of Nuclear Medicine, Department of Clinical Pathology, Taipei Municipal Jen-Ai Hospital, Taipei, Taiwan, R.O.C.*
***Cell Biology and Immunology Division, Development Center for Biotechnology, Taipei, Taiwan, R.O.C.*
****Department of Internal Medicine, Taipei Municipal Jen-Ai Hospital, Taipei, Taiwan, R.O.C.*

Radioiodination of synthetic human secretin on its N-terminal histidyl residue was not difficult when a greater amount of Chloramine T and a longer reaction time were employed to achieve better incorporation of ^{125}I. The radioiodinated tracer for an optimal radioimmunoassay required purification. The combination of Sep-pak C_{18} Cartridge and high performance liquid chromatography for the purification of ^{125}I-secretin in our study revealed that the Sep-pak cartridge was a preliminary step in removing unlabeled radioactive iodide, the reactant, and labeled materials unadsorbed to the cartridge. The eluate eluted from the Sep-pak containing high radioactivity and high immunoreactivity to the antibody were selected for further purification by HPLC which eliminated undesirable radiolabeled substances with lower immunoreactivity. The purified radiolabeled secretin was used in developing a sensitive radioimmunoassay.

Key words: radioiodination, secretin, HPLC, radioimmunoassay