〔Clin. Chim. Acta, **178**, 205 (1988)〕

A Sensitive Two-Site Enzyme immunoassay for Human Pancreatic Secretory Trypsin Inhibitor (PSTI) using Monoclonal Antibodies.

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By using monoclonal antibody against human pancreatic secretory trypsin inhibitor (PSTI), we developed a highly sensitive, simple, and reliable two-site enzyme immunoassay system. The minimum amount of PSTI detected by this EIA is approximately 10 pg/ml when a 100 μl aliquot of the sample is used. Good reproducibilities of within- and between-assay series and excellent recovery of exogenous PSTI from serum were observed. The correlation between the values obtained by the EIA and RIA methods was given by the linear regression equation, $y=1.09x + 4.6$, for which the correlation coefficient (r) was 0.980 (n=20). Antigenicity of the trypsin-PSTI complexes was found to be approximately 10% of that of PSTI.

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Identification of Epidermal Growth Factor in Mouse Abdominal Effusion.

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Epidermal Growth Factor (mEGF)-like immunoreactive material (s) was identified in mouse abdominal effusion (approximately 2.1 ng/mg protein) by our enzyme immunoassay (EIA) for mEGF. This material(s) and mEGF from the submaxillary glands of male mice were virtually equivalent with respect to the molecular weight and the antigenicity. These results demonstrate that the mEGF-like material(s) found in abdominal effusion is a molecule identical to mouse submaxillary gland EGF. Further we found that sialoadenectomy did not cause a marked decrease in the level of mEGF in abdominal effusion, suggesting that mEGF found in abdominal effusion may be not excreted in an endocrine fashion from the submaxillary glands.

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Amino Acid Sequences of Four Cytotoxins (Cytotoxins Ⅰ, Ⅱ, Ⅲ and Ⅳ) Purified from the Venom of the Thailand Cobra, *Naja naja siamensis*.

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Cobra venom toxins contain three main classes of homologous proteins : long neurotoxins, short neurotoxins and cytotoxins (cardiotoxins). The cytotoxins are highly basic polypeptides consisting of 60 amino acid residues and exhibit cytotoxic activities against many kinds of cells. Four cytoxins, designated as cytotoxins I, II, III and IV, were isolated from the venom of the Thailand cobra (*Naja naja siamensis*) by gel filtration on Sephadex G-75 followed by CM-cellulose chromatography. The amino acid sequences were determined by a combination of conventional methods. Cytotoxins I, II, III and IV were each composed of 60 amino acid residues and their molecular weights were calculated to be 6693, 6646, 6709 and 6739, respectively.