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Expression of the pS2 Gene in Human Gastric Cancer Cells Derived from Poorly Differentiated Adenocarcinoma.

HARUO TAKAHASHI, NORIYOSHI KIDA, RITSUKO FUJII, KEN-ICHI TANAKA, MITSUHIRO OHTA, KAZUTOSHI MORI, KYOZO HAYASHI*

NH_2-terminal amino acid sequence of the pS2 protein produced and secreted by human gastric cancer cells, MKN-45, was determined to be identical to that of MCF-7 cells, A clone encoding pS2 protein was isolated from the cDNA library constructed from MKN-45 cells. The nucleotide sequence was identical to that of pS2 cDNA previously isolated from human breast cancer cells, MCF-7, except for one nucleotide in the 3′ untranslated region. Thus, in this cell line, the pS2 gene product is translated and secreted as in MCF-7 cells. RNA blot hybridization analysis revealed that pS2 gene was expressed well in two (MKN-45 and KATO-III) but not in three cell lines.

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Reevaluation of Serum Pancreatic Secretory Trypsin Inhibitor (PSTI) Measured by Monoclonal Antibody-Based Two-Site Enzyme Immunoassay as a Diagnostic Marker.

MASAYUKI KUROBE, TAKASHI FUKATSU, MASAO KONO, NOBUO YOSHIDA, MASASHI ITOH, KYOZO HAYASHI*

Patients with acute pancreatitis or with the chronic disease during recrudescence showed an elevated level PSTI in their circulation, whereas patients with chronic pancreatitis during remission, except for one, showed values within the normal range. Alpha-amylase activity in serum, one of the important markers used in the diagnosis of pancreatic disease, was not meaningfully correlated with PSTI level. Some patients with a variety of tumors also showed an elevated level of serum PSTI. A curative resection of the pancreas caused a decrease in serum PSTI level of the patients to below one half of that before the operation.

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Complete Primary Structure of the Human Estrogen-Responsive Gene (pS2) Product.

KAZUTOSHI MORI, RITSUKO FUJII, NORIYOSHI KIDA, HARUO TAKAHASHI, SHOICHI OHKUBO, MASAHIKO FUJINO, MITSUHIRO OHTA, KYOZO HAYASHI*

pS2 is a human gene whose transcription is directly triggered by estrogen in human breast cancer cells (MCF-7). We described here the complete primary structure of the pS2 gene product. Amino acid sequence analysis of the pS2 established that the protein comprises a 60-amino acid polypeptide. The sequence of the pS2 protein was completely identical to that deduced from the nucleotide sequence of the pS2 gene, if the signal polypeptide is excluded. Furthermore, two cDNA clones encoding an 84-amino acid precursor pS2 protein were isolated from a cDNA library which was construted with RNA from MCF-7 cells cultured in the presence of estrogen.