

# Relationship between gastric carcinoma and intestinal metaplasia from the aspect of the expression of placental alkaline phosphatase messenger RNA

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# 1991 Fiscal Year Final Research Report Summary

## Relationship between gastric carcinoma and intestinal metaplasia from the aspect of the expression of placental alkaline phosphatase messenger RNA

Research Project

### Project/Area Number

02670301

### Research Category

Grant-in-Aid for General Scientific Research (C)

### Allocation Type

Single-year Grants

### Research Field

Gastroenterology

### Research Institution

Kanazawa University

### Principal Investigator

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### Project Period (FY)

1990 - 1991

### Keywords

Placental alkaline phosphatase (PLAP) / immunohistochemistry / PLAP mRNA / RT-PCR method / gastric cancer / KATO-III / intestinal mucosal tissue

### Research Abstract

Intestinal metaplasia of the gastric mucosa has been suggested to represent a precancerous state. However, how it is related to carcinogenesis remains controversial. We developed specific monoclonal antibodies (MAbs) against placental alkaline phosphatase (PLAP). Immunohistochemical study with the specific MAb showed that expression of PLAP was apt to occur in more highly differentiated gastric carcinoma, and was highly specific for carcinoma. Therefore, we attempted to elucidate the expression of PLAP mRNA with the RT-PCR method in various benign and malignant gastric diseases. Each RNA was extracted from KATO-III cells (gastric cancer), intestinal mucosal tissue, BeWo cells (chorionic carcinoma), and placental tissue. Primer pairs were selected as synthetic 25 oligonucleotides which detected the PLAP cDNA region (214 bp) which was widely different from intestinal alkaline phosphatase cDNA (IAP cDNA). The results of RT-PCR showed that 214 bp band appeared in samples from KATO-III cells, BeWo cells, intestinal mucosal tissue as well as placental tissue. On the other hand, PLAP cDNA is very similar to IAP cDNA. These results indicated that primer pairs probably reacted with both PLAP mRNA and IAP mRNA. Furthermore, the amplified PLAPcDNA region in the sample of KATO- III was recognized as a slightly small weight band in electrophoresis and therefore several base pairs of the amplified region might be deleted in KATO- III cells. To clarify these points, further investigations continue.

## Research Products (12 results)

All Other

All Publications (12 results)

- [Publications] Motoo Y: "Serum Levels of tumor-associated glycoprotein (TAG-72)in digestive cancers" Oncology. 47. 456-462 (1990) ▼
- [Publications] Watanabe H: "Expression of placental alkaline phosphatase in gastric and colorectal cancers;an immunohistochemical study using the prepared monoclonal antibody" Cancer. 66. 2575-2582 (1990) ▼
- [Publications] 渡辺 弘之: "胎盤型アルカリフォスファターゼ (PLAP) の発現よりみた胃腸上皮化主と胃癌の関連" Prog.Med. 10. 2373-2380 (1990) ▼
- [Publications] Okai T: "Analysis of gastric carcinoma growth by endoscopic ultrasonogrphy" Endoscopy. 23. 121-125 (1991) ▼
- [Publications] Motoo Y: "Serum Sialyl-Tn antigen levels in patients with digestive cancer" Onology. 48. 321-326 (1991) ▼
- [Publications] Watanabe H: "Singificance of detecting the tumor-associated antigens (placental alkaline phosphatase(PLAP),ST-439,and Sialyl SSEA-1(SLX)) on the differential diagnosis of bening or malignant disease with the metarials of gastric biopsies" Cancer. ▼
- [Publications] Y. Motoo, Y. Satomura, H. Kawakami, H. Watanabe, H. Ohta, T. Okai, N. Sawabu: "Serum levels of tumor-associated glycoprotein (TAG-72) in digestive cancers." Oncology. 47. 456-462 (1990) ▼
- [Publications] H. Watanabe, H. Tokuyama, H. Ohta, Y. Satomura, T. Okai, A. Ooi, M. Mai, N. Sawabu: "Expression of placental alkaline phosphatase in gastric and colorectal cancers ; an immunohistochemical study using the prepared monoclonal antibody." Cancer. 66. 2575-2582 (1990) ▼
- [Publications] T. Okai, O. Yamakawa, N. Matsuda, H. Kawakami, H. Watanabe, Y. Satomura, H. Ohta, Y. Motoo, N. Sawabu: "Analysis of gastric carcinoma growth by endoscopic ultrasonography." Endoscopy. 23. 121-125 (1991) ▼
- [Publications] Y. Motoo, H. Kawakami, H. Watanabe, Y. Satomura, H. Ohta, T. Okai, H. Makino, D. Toya, N. Sawabu: "Serum Sialyl-Tn antigen levels in patients with digestive cancer." Oncology. 48. 321-326 (1991) ▼
- [Publications] H. Watanabe, Y. Yamaguchi, I. Mouri, O. Yamakawa, H. Kawakami, Y. Satomura, H. Ohta, Y. Motoo, T. Okai, N. Sawabu: "Significance of detecting the tumor-associated antigens[placental alkaline phosphatase (PLAP), ST-439, and Sialyl SSEA-1 (SLX)] on the differential diagnosis of benign or malignant disease with the materials of gastric biopsies." Cancer. ▼
- [Publications] H. Watanabe, I. Mouri, Y. Yamaguchi, O. Yamakawa, H. Kawakami, Y. Satomura, H. Ohta, Y. Motoo, T. Okai, M. Fukui, N. Sawabu: "The colon mucus test in comparison with the fecal occult blood test in the detection of gastrointestinal disease." Dig Endosc. 4. (1992) ▼

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