

Title	Partial purification of a thymidine phosphorylase from human gastric cancer
Sub Title	
Author	菅田, 節朗(Sugata, Setsuro) 河野, 彬(Kono, Akira) 原, 泰寛(Hara, Yasuhiro) 加留部, 善晴(Karube, Yoshiharu) 松島, 美一(Matsushima, Yoshikazu)
Publisher	共立薬科大学
Publication year	1986
Jtitle	共立薬科大学研究年報 (The annual report of the Kyoritsu College of Pharmacy). No.31 (1986.) ,p.52- 52
JaLC DOI	
Abstract	
Notes	抄録
Genre	Technical Report
URL	https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AN00062898-00000031-0052

慶應義塾大学学術情報リポジトリ(KOARA)に掲載されているコンテンツの著作権は、それぞれの著作者、学会または出版社/発行者に帰属し、その権利は著作権法によって保護されています。引用にあたっては、著作権法を遵守してご利用ください。

The copyrights of content available on the KeiO Associated Repository of Academic resources (KOARA) belong to the respective authors, academic societies, or publishers/issuers, and these rights are protected by the Japanese Copyright Act. When quoting the content, please follow the Japanese copyright act.

Partial Purification of a Thymidine Phosphorylase from Human Gastric Cancer*

Setsuro SUGATA, Akira KONO**, Yasuhiro HARA**, Yoshiharu
KARUBE,*** and Yoshikazu MATSUSHIMA

菅田節朗, 河野 彬**, 原 泰寛**, 加留部善晴***, 松島美一

We found that a thymidine phosphorylase (TP) activity is greatly enhanced in human tumors as compared with normal tissues and we assumed that the activity is responsible for the *in vivo* conversion of 5'-deoxy-5-fluorouridine (5'-DFUR) and 1-(tetrahydro-2-furanyl)-5-fluorouracil (Tegfur) to 5-fluorouracil (5-FU). 5'-DFUR and Tegafur are antitumor agents, and their activities are manifested after cleavage to 5-FU, an activated form.

A TP preparation was partially purified from human gastric cancer (poorly differentiated adenocarcinoma). The specific activity of the final preparation represented a 379-fold purification of the 7000 g supernatant of tissue homogenate. The phosphorolytic activities toward thymidine (dThd), 5'-DFUR, and Tegafur remained closely in parallel during the whole purification procedure. The results provide evidence in support of the above assumption. The values of K_m of the TP preparation were $1.68 \times 10^{-4}M$, $1.72 \times 10^{-3}M$, $1.33 \times 10^{-2}M$, and $4.76 \times 10^{-2}M$ for dThd, 5'-DFUR, Tegafur, and uridine, respectively.

* 本報告は *Chem. Pharm. Bull.*, 34, 1219 (1986) に発表.

** 九州がんセンター.

*** 福岡大学薬学部.