

Title	Ca <sup>2+</sup> sensitivity and contractile regulatory proteins of glycerinated muscle fiber
Sub Title	
Author	中山, 雪麿(Nakayama, Yukimaro) 渡辺, 葉子( Watanabe, Yoko) 山口, 正弘( Yamaguchi, Masahiro)
Publisher	共立薬科大学
Publication year	1985
Jtitle	共立薬科大学研究年報 (The annual report of the Kyoritsu College of Pharmacy). No.30 (1985. ) ,p.73- 73
JaLC DOI	
Abstract	
Notes	抄録
Genre	Technical Report
URL	<a href="https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AN00062898-00000030-0073">https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AN00062898-00000030-0073</a>

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.

## Ca<sup>2+</sup> Sensitivity and Contractile Regulatory Proteins of Glycerinated Muscle Fiber\*

Yukimaro NAKAYAMA, Yoko WATANABE and Masahiro YAMAGUCHI\*\*

中山雪磨, 渡辺葉子, 山口正弘\*\*

Ca<sup>2+</sup>-sensitive fiber (CaS-fiber) of glycerinated rabbit psoas muscle lost Ca<sup>2+</sup>-sensitivity by digestion of a part of TN-complex by trypsin or intrinsic protease (ex. CANP). Especially, TN-T was removed completely from the bands of SDS polyacrylamide gel electrophoresis by these factors. However, the addition of TN-T, isolated from TN-complex through the column using SP Sephadex C-50 according to the method of Wakabayashi and Ebashi (1968), did not bring about the recovery of Ca<sup>2+</sup>-sensitivity, but TN-I and -C were fainter from the gel. Same result was also obtained from the experiment of CaS-fiber. Then, we checked if the added TN-T behaved itself as an extruding factor of TN-complex using fluorescence analysis. Then, it was found that they were extruded into the extra-fluid.

On the other hand, CaS-fiber lost Ca<sup>2+</sup>-sensitivity transiently when the fiber was immersed in the conditions of high ionic strength and pH 4.5 at 25°C for 2—3 min. But, the treated fiber did not lose any TN-complex on the gel. In this case, Ca<sup>2+</sup>-desensitization was caused by the functional modification of all contractile proteins. So, we examined the effect of NEM (N-ethylmaleimide), by the fluorescence analysis using DACM (a maleimide delivative), and it was suggested that CaS-fiber lost Ca<sup>2+</sup>-sensitivity also by the block of SH-groups in another contractile proteins.

---

\* 本報告は *J. Physiol. Soc. Japan* 47, 514 (1985) に発表

\*\* 順天堂大学体育学部, 栄養生化学