

DB  
1714 (1169)  
2000

Molecular and Biochemical Studies of the *Bacillus subtilis* FtsY Protein, a Homologue of the  $\alpha$  subunit of Mammalian Signal Recognition Particle

Hiroshi KAKESHITA

A dissertation submitted to the Doctoral Program in Biological Sciences, the University of Tsukuba in partial fulfillment of the requirements for the degree of Doctor of Philosophy (Science)

January, 2001

寄 贈	
掛	平成
下	年
大	月
視	日
氏	

01301701

## CONTENS

	PAGES
ABBREVIATIONS -----	1
ABSTRACTS -----	2
GENERAL INTRODUCTION -----	5
FIGURES -----	10
SECTION I ----- Cloning and Characterization of the <i>Bacillus subtilis ftsY (srB)</i> Which product is a Homologue of the $\alpha$ -Subunit of Mammalian Signal Recognition Particle Receptor	22
SUMMARY -----	23
INTRODUCTION -----	24
MATERIAL AND METHODS -----	26
RESULTS -----	30
DISCUSSION -----	35
FIGURES -----	36
SECTION II ----- Expression of the <i>ftsY</i> Gene is Controlled by Different Promoters in Vegetative and Sporulating Cells of <i>Bacillus subtilis</i> and functional analysis of FtsY protein.	60
SUMMARY -----	61
INTRODUCTION -----	62
MATERIAL AND METHODS -----	64
RESULTS -----	70
DISCUSSION -----	77
TABLE -----	79
FIGURES -----	81
GENERAL DISCUSSION -----	103
FIGURES -----	109
REFERENCES -----	113
ACKNOWLEDGEMENTS -----	129