

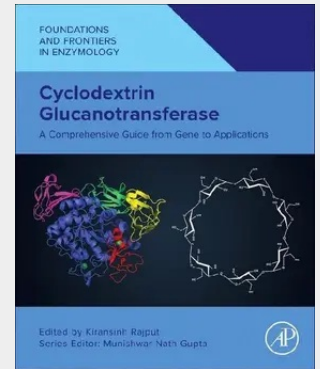
Cyclodextrin Glucanotransferase

A Comprehensive Guide from Gene to Applications

Cyclodextrin Glucanotransferase: A Comprehensive Guide from Gene to Applications explores the essential role of cyclodextrin glucanotransferase (CGTase) in starch degradation and its diverse industrial applications. This book serves as a valuable resource for researchers and industry professionals, offering comprehensive insights from the genetic basis of CGTase to its practical applications. The book covers the production of CGTase by different bacterial genera, including *Bacillus* spp., and their purification strategies. It delves into the structural and functional characteristics of CGTase, highlighting its catalytic mechanisms, substrate specificity, and factors affecting enzyme activity and stability. Additionally, the book explores recombinant CGTases, their properties, and advancements in protein engineering and enzyme immobilization. With a strong focus on practical applications, the book discusses the remarkable properties of cyclodextrins, such as inclusion complex formation, and their wide range of uses in various industries, including pharmaceuticals, textiles, bioremediation, and food. Detailed case studies and real-world examples illustrate how CGTase and cyclodextrins can address specific challenges and drive innovation in these fields. This book is an essential resource for applied science researchers working in the field of starch processing enzymes, providing them with the knowledge to advance their research and development. It also serves as a valuable reference for researchers in the starch processing industries, offering insights into the latest advancements and practical applications of CGTase and cyclodextrins.

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