

# Carboxylic Acid Transporters and Their Functions

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## Introduction

Carboxylic acid transporters (CATs) are a family of membrane proteins that play a crucial role in the transport of various carboxylic acids across cell membranes. These transporters are involved in a wide range of biological processes, including energy metabolism, signaling, and homeostasis. The study of CATs has revealed their diverse functions and mechanisms of action. In this review, we discuss the structure, function, and regulation of several major CATs, including the sodium-dependent dicarboxylate transporter (SDDC), the sodium-dependent oxalate transporter (SDOX), the sodium-dependent citrate transporter (SDCIT), and the sodium-dependent malate transporter (SDM). We also discuss the role of CATs in various tissues and organisms, and the implications of their dysfunction in disease. The study of CATs is an active area of research, and new discoveries are expected to shed light on their mechanisms and functions in the future.

## Conclusion

Membrane proteins, including transporters, are essential for cell function. The study of carboxylic acid transporters (CATs) has revealed their diverse functions and mechanisms of action. In this review, we discuss the structure, function, and regulation of several major CATs, including the sodium-dependent dicarboxylate transporter (SDDC), the sodium-dependent oxalate transporter (SDOX), the sodium-dependent citrate transporter (SDCIT), and the sodium-dependent malate transporter (SDM). We also discuss the role of CATs in various tissues and organisms, and the implications of their dysfunction in disease. The study of CATs is an active area of research, and new discoveries are expected to shed light on their mechanisms and functions in the future.

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