

Peer Review

Review of: "The Steady State Approximation in Enzyme Kinetics: Reflections in Its Centennial Year"

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The document is articulated in a lucid manner and serves as a valuable resource for individuals who need to engage with the kinetics and dynamics of enzyme systems. The author distinctly endorses the accurate and more dependable equation for the Michaelis Constant (K_m) as presented in Scheme 1. The framework of the steady state approximation validates the proposed equation for K_m . It appears that model 2, which addresses the formation of the pre-dissociation complex of enzyme-product (Y), should be more realistic. However, demonstrating the formation of the Y species necessitates a theoretical calculation (DFT methods) and the construction of a potential energy surface for the entire process. Additionally, the optimized structures of X and Y, along with their energy differences, are required.

Declarations

Potential competing interests: No potential competing interests to declare.