

Enzyme Kinetics of SHMT8 Variants

Research indicates that enzymatic activity may vary with mutations of serine hydroxymethyl transferase 8 (SHMT8). To observe the kinetic activity, a phenylserine assay was performed on a strain of soybean SHMT protein called 'Forrest', and three of its mutated variants. Production of Benzaldehyde is monitored at 279nm to observe enzymatic activity, and this was done at varying substrate concentrations of 2 mM, 5mM, 10mM, 15mM, 20mM, and 25mM. Higher K_m values were observed for the mutants of SHMT than for 'Forrest'. This suggests that SHMT mutants have a decreased affinity for the substrate.