

Differences in Kinetic Properties of Cytochrome Oxidase in Mitochondria from Rat Tissues. A Comparative Study

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Substrate kinetic properties of cytochrome oxidase in rat liver, kidney, brain and heart mitochondria were examined using ascorbate + *N,N,N',N'*-tetramethyl-*p*-phenylenediamine (TMPD) as the electron donor system. Analysis of the substrate kinetics data revealed tissue-specific expression of kinetic components exhibiting differences with respect to K_m , V_{max} and K_{cat}/K_m values. Regression analysis data suggest that the enzyme activity may be regulated in a tissue-specific manner.

Key words: Cytochrome Oxidase, Cytochrome Content, Mitochondrial Phospholipids